

Just Released New Books

English Titles

Sorted by author and title within the main subject

Architecture & Design

S. Klinkel, RWTH Aachen, Aachen, Germany; C. Butenweg, RWTH Aachen, Aachen, Germany; G. Lin, Dalian Univ. of Technology, Dalian City, China (P.R.); B. Holtschoppen, RWTH Aachen, Aachen, Germany (Eds.)

Seismic Design of Industrial Facilities

Proceedings of the International Conference on Seismic Design of Industrial Facilities (SeDIF-Conference)

Seismic Design of Industrial Facilities demands a deep knowledge on the seismic behaviour of the individual structural and non-structural components of the facility, possible interactions and last but not least the individual hazard potential of primary and secondary damages. From 26.-27. September 2013 the International Conference on Seismic Design of Industrial Facilities firstly addresses this broad field of work and research in one specialized conference. It brings together academics, researchers and professional engineers in order to discuss the challenges of seismic design for new and existing industrial facilities and to compile innovative current research. This volume contains [...]

Features

Seismic Design of Industrial Facilities demands a deep knowledge on the seismic behaviour of the individual structural and non-structural components of the facility, possible interactions and last but not least the individual hazard potential of primary and secondary damages. From 26.-27. September 2013 the International Conference on Seismic Design of Industrial Facilities firstly addresses [...]

Contents

International building codes and guidelines on the seismic design of industrial facilities.- Seismic design of non-structural components.- Seismic design of silos and liquid-filled tanks.- Soil-structure-interaction effects.- Seismic safety evaluation, uncertainties and reliability analysis.- Innovative seismic protection systems.- Retrofitting.

Fields of interest

Industrial Design; Geotechnical Engineering & Applied Earth Sciences

Target groups

Professional/practitioner

Type of publication

Proceedings

More on www.springer.com/978-3-658-02809-1

Hardcover

2014. XIII, 640 p. 341 illus.

\$109.00

ISBN 978-3-658-02809-1

usually dispatched within 3 to 5 business days

Biomedicine

S. Malek (Ed.)

Advances in Chronic Lymphocytic Leukemia

Chronic lymphocytic leukemia (CLL) is the most common leukemia in the Western world. CLL has a highly varied clinical course. While advances in CLL therapy are noted, many patients still succumb to this illness. Like most progress in medicine, solid advances in the diagnosis, prognosis and treatment of CLL are rooted in an in-depth understanding of the basic and translational biology of CLL. In this book, CLL experts have contributed state-of-the-art summaries of various important aspects of CLL biology and have discussed the translational implication of such findings. This book, which is directed at physicians and researchers alike, aims to educate broadly and deeply. [...]

Features

Chronic lymphocytic leukemia (CLL) is the most common leukemia in the Western world. CLL has a highly varied clinical course. While advances in CLL therapy are noted, many patients still succumb to this illness. Like most progress in medicine, solid advances in the diagnosis, prognosis and treatment of CLL are rooted in an in-depth understanding of the basic and translational biology of CLL. In this book, [...]

Contents

Preface.- B-cell receptor and antigens in CLL.- The CLL cell microenvironment.- Acquired genomic copy number aberrations in CLL.- Recurrent gene mutations in CLL.- TP53 aberrations in CLL.- Gene expression and epigenetic deregulation.- Apoptosis deregulation in CLL.- Richter's Syndrome.- Molecular biomarkers in chronic lymphocytic leukemia.- Critical Signal Transduction Pathways in CLL.- Immunotherapies in CLL.- Novel therapeutic agents in CLL.- Inherited susceptibility to CLL.- miR deregulations in CLL.- Index.

Fields of interest

Cancer Research

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8050-1

Hardcover

2013. XI, 334 p. 25 illus., 24 illus. in color. (Advances in Experimental Medicine and Biology, Vol. 792)

\$189.00

ISBN 978-1-4614-8050-1

usually dispatched within 3 to 5 business days

Y. Cao, Karolinska Institutet, Stockholm, Sweden (Ed.)

Angiogenesis in Adipose Tissue

Angiogenesis has recently played a critical role in regulation of adipose tissue expansion and regression. Like most other tissues in the body, adipose expansion and regression is accompanied by alteration of blood vessel density and structures. The vascular alteration plays an active role in regulation of adipose tissue size and functions. Targeting blood vessels in the adipose tissue have demonstrated to be a novel approach for possibly treatment of cancer, obesity and other metabolic diseases. This book provides the most updated information on this type research and discusses future opportunities for therapy..

Features

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Contents

Preface.- Angiogenesis in diseases and therapy.- Spatiotemporal relation of adipocytes and vascular cells during development.- Adipose stem cells.- Adipose stromal cells.- Vascular adipose complex.- Blood vessels in white and brown adipose tissue.- Lymphatic system in adipose tissues.- The vascular endothelium of the adipose tissue gives rise to both white and brown fat cells.- Vascular and endothelial regeneration.- Angiogenic factors and adipokines in adipose tissue.- Role of NPY in brown adipose tissue and obesity.- Leptin, adiponectin and other angiogenic adipokines in regulation of [...]

Fields of interest

Cancer Research; Lipidology; Cell Biology

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8068-6

Hardcover

2013. VIII, 378 p. 73 illus., 53 illus. in color.

\$209.00

ISBN 978-1-4614-8068-6

usually dispatched within 3 to 5 business days

L. Ducry, Lanza Ltd, Visp, Switzerland (Ed.)

Antibody-Drug Conjugates

Antibody-drug conjugates (ADCs) represent a promising therapeutic approach for cancer patients by combining the antigen-targeting specificity of monoclonal antibodies (mAbs) with the cytotoxic potency of chemotherapeutic drugs. In Antibody-Drug Conjugates, expert researchers provide detailed protocols for many of the key ADC techniques necessary for working in the field. These chapters and methodologies are aimed at the key tasks necessary to identify a suitable target, properly design the mAb, the linker and the payload, as well as to conjugate them in a reproducible and scalable fashion. Written in the highly successful Methods in Molecular Biology™ format, these detailed chapters[...]

Features

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Contents

Antibody-Drug Conjugate (ADC) Clinical Pipeline: A Review.- Antibody-Drug Conjugate Target Selection: Critical Factors.- Selecting an Optimal Antibody for Antibody-Drug Conjugate Therapy: Internalization and Intracellular Localization.- Antibody-Drug Conjugate Payloads.- Linker Technologies for Antibody-Drug Conjugates.- In Vivo Testing of Drug-Linker Stability.- Pharmacokinetics and ADME Characterizations of Antibody-Drug Conjugates.- Safe Handling of Cytotoxic Compounds in a Biopharmaceutical Environment.- Micro- and Mid-Scale Maleimide-Based Conjugation of Cytotoxic Drugs to Antibody[...]

Fields of interest

Pharmacology / Toxicology; Oncology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-540-8

Hardcover

2013. X, 317 p. 96 illus., 42 illus. in color. (Methods in Molecular Biology, Vol. 1045)

\$139.00

ISBN 978-1-62703-540-8

usually dispatched within 3 to 5 business days

M. Kinter, C.S. Kinter

Application of Selected Reaction Monitoring to Highly Multiplexed Targeted Quantitative Proteomics

A Replacement for Western Blot Analysis

A key experiment in biomedical research is monitoring the expression of different proteins in order to detect changes that occur in biological systems under different experimental conditions. The method that is most widely used is the Western blot analysis. While Western blot is a workhorse in laboratories studying protein expression and has several advantages, it also has a number of significant limitations.

In particular, the method is semi-quantitative with limited dynamic range. Western blot focuses on a single protein per sample with only a small number of representative samples analyzed in an experiment. New quantitative tools have been needed for some time to at least[...]

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Features

A key experiment in biomedical research is monitoring the expression of different proteins in order to detect changes that occur in biological systems under different experimental conditions. The method that is most widely used is the Western blot analysis. While Western blot is a workhorse in laboratories studying protein expression and has several advantages, it also has a number of significant [...]

Contents

The use of mass spectrometry for highly selective detection.- overview of how the selected reaction monitoring experiment works.- Designing a selected reaction monitoring method for a protein.- Example analyses include: sample processing, sample analysis, data processing.- Future Directions.

Fields of interest

Biomedicine (general); Proteomics; Mass Spectrometry; Biochemistry

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8665-7

Softcover

2013. XIII, 65 p. 14 illus., 11 illus. in color. (SpringerBriefs in Systems Biology)

\$54.99

ISBN 978-1-4614-8665-7

usually dispatched within 3 to 5 business days

Y.H. Bae, University of Utah, Salt Lake City, USA; R.J. Mrsny, University of Bath, Claverton Down, Bath, United Kingdom; K. Park, Purdue University, West Lafayette, USA (Eds.)

Cancer Targeted Drug Delivery

An Elusive Dream

This book was conceived from a simple question as to why cancer is so difficult to treat. Ultimately we want to find ways to cure cancers, but that may be an elusive dream at least with the technologies we have now and expect to have in the near future. This leads the question of whether it is possible to improve current cancer treatment methods, especially from the perspective of enhancing targeted drug delivery to tumors. This volume is designed to provide information related to the difficulties in treating cancers through targeted drug delivery, our current understanding of cancer biology, and potential technologies that might be used to achieve enhanced drug delivery to tumors.[...]

Features

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Contents

A Time Travel Journey Through Cancer Therapies.- Nanotechnology for Cancer Treatment: Possibilities & Limitations.- Vascular Targeting Approaches to Treat Cancer.- Tumor Immunotherapy by Utilizing a Double-Edged Sword Chemokines.- Cancer Biology: Some Causes for a Variety of Different Diseases.- Cancer Stromal Targeting (CAST) Therapy and Tailored Antibody Drug Conjugate Therapy Depending on Nature of Tumor Stroma.- Cancer Cell Respiration: Hypoxia and pH in Solid Tumors.- Tumor Vasculature, EPR Effect, and Anticancer Nanomedicine: Connecting the Dots.- Pressure Gradients in Solid[...]

Fields of interest

Pharmaceutical Sciences / Technology; Pharmacology / Toxicology

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7875-1

Hardcover

2013. XVII, 720 p. 117 illus., 86 illus. in color.

\$239.00

ISBN 978-1-4614-7875-1

Due: September 30, 2013

S. Makovets (Ed.)

DNA Electrophoresis

Methods and Protocols

In DNA Electrophoresis: Methods and Protocols, expert researchers in the field detail many of the methods which are now commonly used to study DNA using electrophoresis as the major approach. A powerful tool that allows separating DNA molecules according to their size and shape, this volume includes methods and techniques such as 2-dimensional gel electrophoresis as the major approach. These include methods and techniques such as 2-dimensional gel electrophoresis, DNA electrophoresis under conditions in which DNA molecules are completely or partially denatured during the runs, Pulse Field Gel Electrophoresis, electrophoresis coupled to fluorescence in situ hybridization, as well as [...]

Features

In DNA Electrophoresis: Methods and Protocols, expert researchers in the field detail many of the methods which are now commonly used to study DNA using electrophoresis as the major approach. A powerful tool that allows separating DNA molecules according to their size and shape, this volume includes methods and techniques such as 2-dimensional gel electrophoresis as the major approach. These include [...]

Contents

DNA Electrophoresis: Historical and Theoretical Perspectives.- Basic DNA Electrophoresis in Molecular Cloning: a Comprehensive Guide for Beginners.- Analysis of Branched DNA Replication and Recombination Intermediates from Prokaryotic Cells by Two-dimensional (2D) Native-native Agarose Gel Electrophoresis.- Analysis of DNA Structures from Eukaryotic cells by Two-dimensional Native-native DNA Agarose Gel Electrophoresis.- Directionality of Replication Fork Movement Determined by Two-dimensional Native-native DNA Agarose Gel Electrophoresis.- Native/Denaturing Two-Dimensional DNA [...]

Fields of interest

Human Genetics; Electrophoresis

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-564-4

Hardcover

2013. X, 299 p. 56 illus., 20 illus. in color. (Methods in Molecular Biology, Vol. 1054)

\$119.00

ISBN 978-1-62703-564-4

usually dispatched within 3 to 5 business days

A. Kral, A. Popper, R.R. Fay (Eds.)

Deafness

This book considers deafness as a medical condition, exploring the neuronal consequences on the peripheral and the central nervous system as well as on cognition and learning, viewed from the standpoint of genetics, neuroanatomy and neurophysiology, molecular biology, systems neuroscience, and cognitive neuroscience.

Features

Deafness explores the neuronal consequences of being deaf on the peripheral and the central nervous system as well as on cognition and learning, viewed from the standpoint of genetics, neuroanatomy and neurophysiology, molecular biology, systems neuroscience, and cognitive neuroscience. · To Hear or Not To Hear: Neuroscience of Deafness Andrej Kral · [...]

Contents

1. To Hear or Not To Hear: Neuroscience of Deafness Andrej Kral.- 2. Molecular Etiology of Deafness and Cochlear Consequences Zippora Brownstein, Shaked Shivatzki, and Karen B. Avraham.- 3. Effects of Early-Onset Deafness in the Developing Auditory System Patricia A. Leake, Olga Stakhovskaya, and Stephen J. Rebscher.- 4. Synaptic Organization and Plasticity in the Auditory System of the Deaf White Cat Michael A. Muniak, Catherine J. Connolly, Natasha N. Tirko, Jahn N. O'Neil, and David K. Ryugo.- 5. Synaptic and Cellular Consequences of Hearing Loss Dan H. Sanes.- 6. Integrative [...]

Fields of interest

Neurosciences

Target groups

Graduate

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7839-3

Hardcover

2013. XIV, 299 p. 54 illus., 20 illus. in color. (Springer Handbook of Auditory Research, Vol. 47)

\$139.00

ISBN 978-1-4614-7839-3

usually dispatched within 3 to 5 business days

A.K. Naumova, C.M. Greenwood, Jewish General Hospital, Montreal, Canada (Eds.)

Epigenetics and Complex Traits

This book will provide an overview of basic epigenetic phenomena; interaction between epigenetic and genetic factors; and the influence of epigenetic factors on inheritance. Epigenetic states may contribute to the penetrance of genetic polymorphisms or mutations and thereby modify inheritance patterns. This may result in non-Mendelian inheritance of genetic traits such as observed in common human disease. The relationship between epigenetics and genetics, however, has not been comprehensively summarized yet. The topic is being more and more appreciated lately due to considerable advances in genomic and epigenomic approaches to study the origins of human disease. The editors will [...]

Features

Epigenetics and Complex Traits provides an overview of basic epigenetic phenomena that influence transmission of genetic traits, including the pivotal roles of epigenetic factors in genome integrity, genetic transmission and phenotypic variation at critical developmental points, interactions between epigenetic marks and genetic variation, as well as a detailed examination of how epigenetic [...]

Contents

Part I: Epigenetic phenomena in the germ line and early embryonic development and their effects on the inheritance of genetic traits.- Epigenetic reprogramming in the mammalian germ line.- Establishment of tissue-specific epigenetic states during development.- X-chromosome inactivation.- Cis- and trans-effects underlying polar overdominance at the callipyge locus.- Transgenerational epigenetic effects and complex inheritance patterns.- Autosomal monoallelic expression.- Part II: Epigenetic variation in health and disease.- Recurrent CNVs in the etiology of epigenetic neurodevelopmental [...]

Fields of interest

Human Genetics; Developmental Biology; Statistics for Life Sciences, Medicine, Health Sciences

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8077-8

Hardcover

2013. XXII, 341 p. 43 illus., 33 illus. in color.

\$209.00

ISBN 978-1-4614-8077-8

usually dispatched within 3 to 5 business days

X. Li, Intelligent Systems Research Centre, Londonderry, United Kingdom

Functional Magnetic Resonance Imaging Processing

With strong numerical and computational focus, this book serves as an essential resource on the methods for functional neuroimaging analysis, diffusion weighted image analysis, and longitudinal VBM analysis. It includes four MRI image modalities analysis methods. The first covers the PWI methods, which is the basis for understanding cerebral flow in human brain. The second part, the book's core, covers fMRI methods in three specific domains: first level analysis, second level analysis, and effective connectivity study. The third part covers the analysis of Diffusion weighted image, i.e. DTI, QBI and DSI image analysis. Finally, the book covers (longitudinal) VBM methods and its[...]

Features

With strong numerical and computational focus, this book serves as an essential resource on the methods for functional neuroimaging analysis, diffusion weighted image analysis, and longitudinal VBM analysis. It includes four MRI image modalities analysis methods. The first covers the PWI methods, which is the basis for understanding cerebral flow in human brain. The second part, the book's core, covers MRI [...]

Contents

Preface.- MRI perfusion weighted imaging analysis.- Perfusion imaging.- Gamma-variate fitting.- AIF selection.- Dispersion effects in DSC-MRI.- Summary of the PWI algorithm.- First level fMRI data analysis for activation detection.- fMRI experimental design.- fMRI data pre-processing.- Activation detection: model free and model based methods.- Models for hemodynamic response function and drift.- General linear model (GLM) for activation detect.- Hypothesis test and threshold correction.- Summary of algorithm for 1st level fMRI data analysis.- 2nd level fMRI data analysis using mixed[...]

Fields of interest

Neurosciences; Computer Imaging, Vision, Pattern Recognition and Graphics; Statistics and Computing / Statistics Programs; Cognitive Psychology; Imaging / Radiology; Numerical and Computational Physics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-7301-1

Hardcover

2014. XIII, 221 p. 72 illus., 58 illus. in color.

\$189.00

ISBN 978-94-007-7301-1

usually dispatched within 3 to 5 business days

M.J. Wheeler, Consultant Clinical Scientist, Exmouth, United Kingdom (Ed.)

Hormone Assays in Biological Fluids

Hormone measurement is necessary for the diagnosis of a wide range of clinical conditions and is essential for monitoring the effectiveness of treatment. As the number of hormone requests in the clinical field rises exponentially, it has become imperative to create hormone assays accessible to researchers with a varied range of equipment. Hormone Assays in Biological Fluids, Second Edition reviews common techniques used to measure hormones as well as relatively new methods such as tandem mass spectrometry. Additionally, subsequent chapters detail methods for a broad range of hormones; Techniques and principles covered are transferable to a wide range of substances across species.[...]

Features

Hormone measurement is necessary for the diagnosis of a wide range of clinical conditions and is essential for monitoring the effectiveness of treatment. As the number of hormone requests in the clinical field rises exponentially, it has become imperative to create hormone assays accessible to researchers with a varied range of equipment. Hormone Assays in Biological Fluids, Second Edition reviews [...]

Contents

A Short History of Hormone Measurement.- Immunoassay Techniques.- Introduction to Gas Chromatography-Mass Spectrometry.- Tandem Mass Spectrometry in Hormone Measurement.- Methods for the Investigation of Thyroid Functions.- The Measurement of LH, FSH and Prolactin.- Assays of GH, IGF-1 and IGF Binding Protein-3.- Measurement of Arginine Vasopressin.- The Measurement of Anti-Müllerian Hormone.- Measurement of Gut Hormones in Plasma.- Measurement of Melatonin and 6-Sulphatoxymelatonin.- Measurement of Glucocorticoids in Biological Fluids.- Measurement of Androgens.- Measurement of [...]

Fields of interest

Molecular Medicine; Endocrinology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-615-3

Hardcover

2013. XI, 310 p. 34 illus., 14 illus. in color. (Methods in Molecular Biology, Vol. 1065)

\$139.00

ISBN 978-1-62703-615-3

usually dispatched within 3 to 5 business days

M. Steinitz (Ed.)

Human Monoclonal Antibodies

Methods and Protocols

The introduction of monoclonal antibodies revolutionized immunology. The development of human monoclonal antibodies was inspired primarily by the enormous clinical benefits promised by these reagents which can be used as anti-inflammatory reagents, anti-tumor reagents and reagents for passive immunization in a variety of pathologies. Human Monoclonal Antibodies: Methods and Protocols presents technical protocols of cellular and molecular methods for the production, purification and application of human monoclonal antibodies, as well as review articles on related topics of human monoclonal and polyclonal antibodies. Written in the successful Methods in Molecular Biology series format, [...]

Features

The introduction of monoclonal antibodies revolutionized immunology. The development of human monoclonal antibodies was inspired primarily by the enormous clinical benefits promised by these reagents which can be used as anti-inflammatory reagents, anti-tumor reagents and reagents for passive immunization in a variety of pathologies. Human Monoclonal Antibodies: Methods and Protocols presents [...]

Contents

Human Monoclonal Antibodies - The Residual Challenge of Antibody Immunogenicity.- Technical and Ethical Limitations in Making Human Monoclonal Antibodies.- Therapeutic Human Monoclonal Antibodies in Inflammatory Diseases.- Therapeutic Human Monoclonal Antibodies Against Cancer.- Polyclonal and Monoclonal Antibodies in the Clinic.- Production of Human Monoclonal Antibodies by the Epstein-Barr Virus Method.- Humanization and Simultaneous Optimization of Monoclonal Antibody.- Chimeric Antibodies.- Recombinant Genetic Libraries and Human Monoclonal Antibodies.- Production of Stabilized[...]

Fields of interest

Immunology; Antibodies

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-585-9

Hardcover

2014. XI, 364 p. 38 illus., 17 illus. in color. (Methods in Molecular Biology, Vol. 1060)

\$139.00

ISBN 978-1-62703-585-9

usually dispatched within 3 to 5 business days

K.M. Fulton, National Research Council Canada, Ottawa, Canada;
S.M. Twine, National Research Council Canada, Ottawa, Canada
(Eds.)

Immunoproteomics

Methods and Protocols

Providing current diverse approaches and techniques used to study the immunoproteome, Immunoproteomics: Methods and Protocols collects chapters from key researchers that deliver information to be used in diagnostics, disease progression, and vaccine correlates of protection analysis, to name but a few. This detailed volume includes techniques used for the study of the antibody targets of bacterial pathogens, viruses, and cancer, mass spectrometry-based approaches to characterize T-cell epitopes, chapters on detection and relative quantification of cytokines in serum, as well as in silico prediction of epitopes using sequence-based or modeling approaches. Written in the highly [...]

Features

Providing current diverse approaches and techniques used to study the immunoproteome, Immunoproteomics: Methods and Protocols collects chapters from key researchers that deliver information to be used in diagnostics, disease progression, and vaccine correlates of protection analysis, to name but a few. This detailed volume includes techniques used for the study of the antibody targets of bacterial [...]

Contents

Introduction to the Immune System.- Immunoproteomics: Current Technology and Applications.- Antigen Identification Using SEREX.- Antigen Discovery Using Whole-Genome Phage Display Libraries.- Methods and Applications of Serological Proteome Analysis.- Pre-Absorbed Immunoproteomics: A Novel Method for the Detection of Bacterial Surface Proteins.- Identification of the Antigen Content of Electroimmunoprecipitates.- An Immunoproteomics Approach to Screen the Antigenicity of the Influenza Virus.- In Vivo Microbial Antigen Discovery (InMAD) to Identify Diagnostic Proteins and Polysaccharides[...]

Fields of interest

Immunology; Proteomics

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-588-0

Hardcover

2013. XI, 370 p. 73 illus., 33 illus. in color. (Methods in Molecular Biology, Vol. 1061)

\$139.00

ISBN 978-1-62703-588-0

usually dispatched within 3 to 5 business days

J. Zschocke, Medizinische Universität Innsbruck, Innsbruck, Austria; K.M. Gibson, Washington State University, Pullman, USA; G. Brown, University of Oxford, Oxford, United Kingdom; E. Morava, Radboud University Nijmegen, Nijmegen, Netherlands; V. Peters, Center for Child and Adolescent Medicine, Heidelberg, Germany (Eds.)

JIMD Reports - Volume 11

JIMD Reports publishes case and short research reports in the area of inherited metabolic disorders. Case reports highlight some unusual or previously unrecorded feature relevant to the disorder, or serve as an important reminder of clinical or biochemical features of a Mendelian disorder.

Features

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Contents

Different Case Studies.

Fields of interest

Human Genetics; Metabolic Diseases; Pediatrics; Human Physiology

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-37327-5

Softcover

2013. VII, 172 p. 47 illus., 24 illus. in color. (JIMD Reports, Vol. 11)

\$139.00

ISBN 978-3-642-37327-5

usually dispatched within 3 to 5 business days

R.G. Beran (Ed.)

Legal and Forensic Medicine

This is a comprehensive reference text that examines the current state of Legal Medicine, which encompasses Forensic Medicine, in the 21st century. It examines the scope of both legal and forensic medicine, its application and study and has adopted a wide ranging approach including multinational authorship. It reviews the differences between and similarities of forensic and legal medicine, the need for academic qualification, the applications to many and varied fields including international aid, military medicine, health law and the application of medical knowledge to both criminal law and tort/civil law, sports medicine and law, gender and age related factors from obstetrics through [...]

Features

This is a comprehensive reference text that examines the current state of Legal Medicine, which encompasses Forensic Medicine, in the 21st century. It examines the scope of both legal and forensic medicine, its application and study and has adopted a wide ranging approach including multinational authorship. It reviews the differences between and similarities of forensic and legal medicine, the need for [...]

Contents

Are legal and forensic medicine the same.- the need for qualification.- legal and forensic medicine in clinical practice.- wider application of legal and forensic medicine.- legal and forensic medicine - international perspectives.

Fields of interest

Forensic Science; Forensic Medicine; Medical Law

Target groups

Research

Type of publication

Handbook

More on www.springer.com/978-3-642-32337-9

Hardcover

2013. XXXI, 1845 p. 35 illus., 31 illus. in color. In 3 volumes, not available separately.

\$679.00

ISBN 978-3-642-32337-9

usually dispatched within 3 to 5 business days

Hardcover

2013. XXXI, 1845 p. 35 illus., 31 illus. in color. Print + eReference. In 2 volumes, not available separately.

\$849.00

ISBN 978-3-642-32339-3

Due: August 20, 2013

A. Kumar

Leishmania and Leishmaniasis

Leishmania-related illnesses remain among the world's deadliest neglected tropical diseases, affecting approximately 12 million people in 88 countries. The mortality rate is substantial, contributing to nearly two million disability-adjusted life years. As more is understood about this parasite and its effects, work toward prevention, control, and treatment continues apace. Leishmania and Leishmaniasis will address the parasite and its attendant disease, which manifests in three syndromes: Visceral (VL), Cutaneous (CL) and Mucocutaneous Leishmaniasis (ML). The morphology and life cycles of the various species will be among the topics addressed in Part One. Part Two will focus on[...]

Features

Leishmania-related illnesses remain among the world's deadliest neglected tropical diseases, affecting approximately 12 million people in 88 countries. The mortality rate is substantial, contributing to nearly two million disability-adjusted life years. As more is understood about this parasite and its effects, work toward prevention, control, and treatment continues apace. Leishmania and Leishmaniasis [...]

Contents

Historical background of Leishmania and leishmaniasis.- Risk factors and definition of the problem.- Types of leishmaniasis.- Global status of visceral leishmaniasis.- Status of visceral leishmaniasis in India.- Morphology and Life cycle of Leishmania donovani.- Vectors and transmission of the disease.- Clinical symptoms of visceral leishmaniasis.- Control strategies of the disease.- Leishmania/HIV co-infections.- Host Immune response to Leishmania infection.- Cross-immunity between different Leishmania species.- Adoptive transfer of immunity.- Cutaneous leishmaniasis.- Mucocutaneous[...]

Fields of interest

Immunology; Parasitology; Biomedicine (general)

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8868-2

Softcover

2013. XI, 83 p. 14 illus., 11 illus. in color. (SpringerBriefs in Immunology, Vol. 3)

\$54.99

ISBN 978-1-4614-8868-2

usually dispatched within 3 to 5 business days

U. Roessner, D.A. Dias (Eds.)

Metabolomics Tools for Natural Product Discovery

Methods and Protocols

Classical natural product chemistry is transitioning to modern day metabolomics as a result of the advent of comprehensive analytical platforms and sensitive analytical instrumentation. Therefore, it is worthwhile to summarize recent developments with current analytical platforms and highlight how metabolomics is being integrated into this classical field to dereplicate and profile natural product extracts. Metabolomics Tools for Natural Product Discoveries: Methods and Protocols aims to unite diverse and recently developed methodologies and protocols in order to identify bioactive secondary metabolites for the purpose of drug discovery. Some topics covered in this volume include[...]

Features

Classical natural product chemistry is transitioning to modern day metabolomics as a result of the advent of comprehensive analytical platforms and sensitive analytical instrumentation. Therefore, it is worthwhile to summarize recent developments with current analytical platforms and highlight how metabolomics is being integrated into this classical field to dereplicate and profile natural product extracts. [...]

Contents

Bryophytes: Liverworts, Mosses and Hornworts – Extraction and Isolation Procedures.- Plant Tissue Extraction for Metabolomics.- Detection of Polar Metabolites through the use of Gas Chromatography – Mass Spectrometry.- A Robust GC-MS Method for the Quantitation of Fatty Acids in Biological Systems.- A Workflow from Untargeted LC-MS Profiling to Targeted Natural Product Isolation.- Lipidomics – Extraction Protocols for Biological Matrices.- Metabolite Analysis of Biological Fluids and Tissues by Proton Nuclear Magnetic Resonance Spectroscopy.- NMR Spectroscopy: Structure Elucidation of[...]

Fields of interest

Pharmacology / Toxicology; Analytical Chemistry

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-576-7

Hardcover

2013. X, 311 p. 83 illus., 33 illus. in color. (Methods in Molecular Biology, Vol. 1055)

\$119.00

ISBN 978-1-62703-576-7

usually dispatched within 3 to 5 business days

A. Singh, University of Dayton, Dayton, USA; M. Kango-Singh, University of Dayton, Dayton, USA (Eds.)

Molecular Genetics of Axial Patterning, Growth and Disease in the Drosophila Eye

Undoubtedly, *Drosophila melanogaster*, fruit fly, has proved to be one of the most popular invertebrate model organisms, and the work horse for modern day biologists. *Drosophila*, a highly versatile model with a genetic legacy of more than a century, provides powerful genetic, cellular, biochemical and molecular biology tools to address many questions extending from basic biology to human diseases.

One of the most important questions in biology focuses on how does a multi-cellular organism develop from a single-celled embryo. The discovery of the genes responsible for pattern formation has helped refine this question, and led to other questions, such as the role of various genetics and[...]

Features

Undoubtedly, *Drosophila melanogaster*, fruit fly, has proven to be one of the most popular invertebrate model organisms, and the work horse for modern day biologists. *Drosophila*, a highly versatile model with a genetic legacy of more than a century, provides powerful genetic, cellular, biochemical and molecular biology tools to address many questions extending from basic biology to human diseases. One of [...]

Contents

Early eye development: Specification and Determination.- Molecular genetic mechanisms of axial patterning: Mechanistic insights into generation of axes in the developing eye.- Catching the Next Wave: Patterning of the Drosophila Eye by the Morphogenetic Furrow.- Cell Morphogenesis.- Cell Polarity in Drosophila Retina.- Negative regulation for neural patterning in the Drosophila eye.- Cell Adhesion during Drosophila eye development.- Modulation of Developmental Signaling by the Proteostasis Network.- Drosophila eye as a model to study regulation of growth control: The discovery of size[...]

Fields of interest

Human Genetics; Animal Models; Biomedicine (general)

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8231-4

Hardcover

2013. XIV, 368 p. 68 illus., 63 illus. in color.

\$209.00

ISBN 978-1-4614-8231-4

usually dispatched within 3 to 5 business days

S. Modrow, D. Falke, U. Truyen, H. Schätzl, TU München, München, Germany

Molecular Virology

The book gives a comprehensive overview on the knowledge of virus infection relevant for humans and animals. For each virus family the molecular details of the virus particle and the viral replication cycle are described. In the case of virus types with relevance for human and/or animal health the data on molecular biology, genetics and virus-cell interaction are combined with those concerning, pathogenesis, epidemiology, clinics, prevention and therapy.

Features

The book gives a comprehensive overview on the knowledge of virus infection relevant for humans and animals. For each virus family the molecular details of the virus particle and the viral replication cycle are described. In the case of virus types with relevance for human and/or animal health the data on molecular biology, genetics and virus-cell interaction are combined with those concerning, pathogenesis, [...]

Contents

A General part.- Historical overview.- Viruses: definition, structure, classification.- Virus proliferation and replication.- Pathogenesis.- Cell damage.- Transformation and carcinogenesis.- Immunology.- Cytokines, chemokines and interferons.- Chemotherapy.- Vaccines.- Epidemiology.- Virus evolution.- Laboratory methods for detection virus infections.- B Special part.- Viruses with single-stranded, positive-sense RNA genomes.- Viruses with single-stranded, non-segmented, negative-sense RNA genomes.- Viruses with single-stranded, segmented, negative-sense RNA genomes.- Viruses with [...]

Fields of interest

Molecular Medicine; Virology; Medical Microbiology; Infectious Diseases

Target groups

Graduate

Type of publication

Handbook

More on www.springer.com/978-3-642-20717-4

Hardcover

2013. VIII, 1016 p. 166 illus., 124 illus. in color.

\$679.00

ISBN 978-3-642-20717-4

usually dispatched within 3 to 5 business days

2013. VIII, 1016 p. 166 illus., 124 illus. in color. eReference.

\$679.00

ISBN 978-3-642-20718-1

Online orders shipping within 2-3 days.

Hardcover

2013. VIII, 1016 p. 166 illus., 124 illus. in color. Print + eReference.

\$849.00

ISBN 978-3-642-20719-8

Online orders shipping within 2-3 days.

A. Suzumura, K. Ikenaka, National Inst of Physiological Science, Aichi, Japan (Eds.)

Neuron-Glia Interaction in Neuroinflammation

Accumulation on glia is an active pathological element in many neurological disorders. Gliosis produces neuroinflammation through both neurotrophic and inflammatory means, but the exact mechanism through which this happens remain unclear. It is suspected that damage to neurons activates the growth of glial cells. The proposed book focuses on the interaction between neurons and glia to help elucidate the pathophysiology of neuroinflammation in neurological disorders.

Features

Accumulation of glia, gliosis, in various neurological disorders is not a static scar, but actively involved in pathogenesis of various neurological and psychiatric disorders, where glial cells produce both inflammatory and neurotrophic factors. These factors may play a role in neuronal damage, but also have a protective and reparative function by inducing neuroinflammation. However, definition as well as [...]

Contents

Acute, Chronic, and Non-classical Neuroinflammation: Definitions in a Changing Scientific Environment.- Neuroinflammation in Neurological Disorders.- Factors from Intact and Damaged Neurons.- Interactions between Neurons and Microglia During Neuroinflammation.- Neuron-Astrocyte Interactions in Neuroinflammation.- Neuron-oligodendrocyte Interactions in Neuroinflammation.- Neuron-glia Interaction via Neurotrophins.- Glial Communication via Gap Junction in Neuroinflammation.- Toll-Like Receptors and Neuroinflammation.- The Blood-Brain-Barrier in Neuroinflammation.

Fields of interest

Neurosciences; Neurology

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8312-0

Hardcover

2013. X, 187 p. 25 illus., 24 illus. in color. (Advances in Neurobiology, Vol. 7)

\$189.00

ISBN 978-1-4614-8312-0

usually dispatched within 3 to 5 business days

S. Amini, Temple University, Philadelphia, USA; M.K. White, Temple University, Philadelphia, USA (Eds.)

Neuronal Cell Culture

Methods and Protocols

In Neuronal Cell Culture: Methods and Protocols, the latest aspects of the culture of neural cells are explored by experts in the field who also explain the practical and theoretical considerations of the techniques involved. Starting with a general overview of the neuronal culturing principles that are described, this detailed volume covers cell line models for neural cells, the isolation and propagation of primary cultures, stem cells, transfection and transduction of neural cultures, and other more advanced techniques. Written for the Methods in Molecular Biology series, chapters include introductions to their respective topics, lists of the necessary materials and reagents, [...]

Features

In Neuronal Cell Culture: Methods and Protocols, the latest aspects of the culture of neural cells are explored by experts in the field who also explain the practical and theoretical considerations of the techniques involved. Starting with a general overview of the neuronal culturing principles that are described, this detailed volume covers cell line models for neural cells, the isolation and [...]

Contents

General Overview of Neuronal Cell Culture.- Considerations for the Use of SH-SY5Y Neuroblastoma Cells in Neurobiology.- Cultured Cell Line Models of Neuronal Differentiation: NT2, PC12.- Murine Teratocarcinoma-Derived Neuronal Cultures.- Isolation and Propagation of Primary Human and Rodent Embryonic Neural Progenitor Cells and Cortical Neurons.- Mouse Enteric Neuronal Cell Culture.- Preparation of Neural Stem Cells and Progenitors: Neuronal Production and Grafting Applications.- Derivation of Neuronal Cells from Fetal Normal Human Astrocyte (NHA).- Slice Culture Modeling of Central [...]

Fields of interest

Neurosciences; Neurobiology; Cell Culture

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-639-9

Hardcover

2013. X, 165 p. 38 illus., 31 illus. in color. (Methods in Molecular Biology, Vol. 1078)

\$189.00

ISBN 978-1-62703-639-9

usually dispatched within 3 to 5 business days

R. Kumar (Ed.)

Nuclear Signaling Pathways and Targeting Transcription in Cancer

At the moment, there is no dedicated book to summarize the roles, the significance, and potential therapeutic targeting of transcriptional factors from the perspective of signaling cascade, and thus, directly impacting the functionality of transcriptional factors in cancer. In addition, this book will offer a comprehensive basic and clinical science behind the functions of representative core transcriptional factors. These chapters will serve as a treasure for all those who have an interest in the basis, progression, and targeting of human cancer. Each chapter will be intended to provide comprehensive, up-to-date information by the leaders about the physiologic and pathologic roles of [...]

Features

This book presents the most up-to-date information in the area of targeted therapeutics with a particular focus on pathway-centered approaches and transcription by leading authorities in molecular cancer research. The goal is to cover several critical principles of cancer therapeutics, ranging from regulation of cancer associated genes by coregulators, cancer cell signaling, modifiers of epigenome [...]

Contents

Preface.- Steroid Receptor Coactivators (SRCs) as Integrators of Multiple Signaling Pathways in Cancer Progression.- Role of Alteration/Deficiency in Activation (ADA) Complex in the Cell Cycle, Genomic Instability and Cancer.- RUNX2 Transcriptional Regulation in Development and Disease.- Epigenetic Mechanisms of Cancer Metastasis.- Regulatory Effects of Arsenic on Cellular Signaling Pathways: Biological Effects and Therapeutic Implications.- Nuclear Factors Linking Cancer and Inflammation.- Regulation of the Jak/STATs Pathways by Histone Deacetylases.- Receptor Tyrosine Kinases in the [...]

Fields of interest

Cancer Research; Pharmacology / Toxicology

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8038-9

Hardcover

2013. XII, 439 p. 56 illus., 52 illus. in color. (Cancer Drug Discovery and Development)

\$189.00

ISBN 978-1-4614-8038-9

usually dispatched within 3 to 5 business days

D.M. Kolpashchikov, Y.V. Gerasimova, University of Central Florida, Orlando, USA (Eds.)

Nucleic Acid Detection

Methods and Protocols

In Nucleic Acid Chemistry: Methods and Protocols, expert researches in the field detail techniques and approaches for the detection of DNA and RNA. These techniques include the recovery of trace amounts of DNA for amplification and analysis, new qPCR chemistries, new application of isothermal amplification techniques, assays with visual or electric signals for point-of-care diagnostics, improvement of fluorescent in situ hybridization, and new signal amplification techniques. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily [...]

Features

In Nucleic Acid Chemistry: Methods and Protocols, expert researches in the field detail techniques and approaches for the detection of DNA and RNA. These techniques include the recovery of trace amounts of DNA for amplification and analysis, new qPCR chemistries, new application of isothermal amplification techniques, assays with visual or electric signals for point-of-care diagnostics, improvement [...]

Contents

"Getting Blood from a Stone": Ultra-Sensitive Forensic DNA Profiling of Microscopic Bio-particles Recovered from 'Touch DNA' Evidence.- Detecting MicroRNA in Human Cancer Tissues with Fluorescence in situ Hybridization.- MNazyme qPCR: A Superior Tool for Multiplex qPCR.- A New, Multiplex, Quantitative Real-time Polymerase Chain Reaction System for Nucleic Acid Detection and Quantification.- Detection of SNP-Containing Human DNA Sequences Using a Split Sensor with Universal Molecular Beacon Reporter.- SNP Analysis using a Molecular Beacon-based Operating Cooperatively (OC) Sensor.- [...]

Fields of interest

Human Genetics; Nucleic Acid Chemistry

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-534-7

Hardcover

2013. XIV, 320 p. 85 illus., 58 illus. in color. (Methods in Molecular Biology, Vol. 1039)

\$139.00

ISBN 978-1-62703-534-7

usually dispatched within 3 to 5 business days

A. Malek, Federal State Institution N.N.Petrov Res, St. Petersburg, Russian Federation; O. Tchernitsa (Eds.)

Ovarian Cancer

Methods and Protocols

Ovarian cancer is the most lethal malignancy of the female reproductive system and is also the fifth leading cause of cancer death in women. Sharing common characteristics of cancer, ovarian malignancy possess several clinical and biological particularities. In Ovarian Cancer: Methods and Protocols, expert researchers in the field provide methods that have been created or adapted to study various aspects of ovarian cancer. These methods and techniques are applicable to study genetic alterations present in ovarian cancer, structural and metabolic features of ovarian cancer cells, include in vitro and in vivo models that recapitulate ovarian cancer development and progression, and [...]

Features

Ovarian cancer is the most lethal malignancy of the female reproductive system and is also the fifth leading cause of cancer death in women. Sharing common characteristics of cancer, ovarian malignancy possess several clinical and biological particularities. In Ovarian Cancer: Methods and Protocols, expert researchers in the field provide methods that have been created or adapted to study various [...]

Contents

Ovarian Cancer Genome.- Identifying Associations Between Genomic Alterations in Tumours.- Analysis of Genome-wide DNA Methylation Profiles by Bead-Chip Technology.- Integrative Prediction of Gene Function and Platinum Free Survival from Genomic and Epigenetic Features in Ovarian Cancer.- Survival Prediction Based on Inherited Gene Variation Analysis.- Main Principles and Outcomes of DNA Methylation Analysis.- Methylation-specific PCR.- Bisulfite Sequencing of Cloned Alleles.- Bisulfite Pyrosequencing.- RNA Networks in Ovarian Cancer.- Microarray-based Transcriptome Profiling of Ovarian [...]

Fields of interest

Cancer Research; Oncology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-546-0

Hardcover

2013. XIV, 515 p. 83 illus., 47 illus. in color. (Methods in Molecular Biology, Vol. 1049)

\$139.00

ISBN 978-1-62703-546-0

usually dispatched within 3 to 5 business days

S. Staibano, University Federico II of Naples, Naples, Italy (Ed.)

Prostate Cancer: Shifting from Morphology to Biology

The aim of this book will be to contribute to the education of a new generation of experts in urology, molecular biology, pathology and oncology, offering them sufficient knowledge in basic and translational research to be fluency in the web of interacting networks playing a role in prostate cancer development, progression, metastasis and drug-resistance. The volume will cover the latest innovative researches in prostate cancer, with particular emphasis to the state-of-the-art analysis technologies that are essential for the accurate identification of molecular targets for disease diagnosis, molecular mechanisms of tumorigenesis, markers for susceptibility, molecular-based prognostic[...]

Features

The aim of this book will be to contribute to the education of a new generation of experts in urology, molecular biology, pathology and oncology, offering them sufficient knowledge in basic and translational research to be fluency in the web of interacting networks playing a role in prostate cancer development, progression, metastasis and drug-resistance. The volume will cover the latest innovative researches [...]

Contents

Foreword. Preface. List of contributors. I Clues to morphological diagnosis and prognosis evaluation.- Update on diagnostic criteria, on biopsy and surgical specimen: pre-invasive lesions, from epithelial cell hyperplasia to carcinoma in situ invasive carcinoma. First-line immunophenotyping of prostate diseases.- II Molecular pathology.- Molecular determinants of cancer-related inflammation.- Apoptosis and autophagy.- Androgen receptor and steroidogenesis pathways.- Neuroendocrine differentiation – role of somatostatin receptors (SSTRs) for diagnosis, prognosis, and therapy.- Metastatic[...]

Fields of interest

Cancer Research; Human Genetics; Gene Expression; Drug Resistance; Pathology; Oncology

Target groups

Graduate

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7148-2

Hardcover

2013. XVIII, 296 p. 41 illus., 38 illus. in color.

\$189.00

ISBN 978-94-007-7148-2

usually dispatched within 3 to 5 business days

B. Bonavida (Ed.)

Resistance to Immunotherapeutic Antibodies in Cancer

Strategies to Overcome Resistance

The traditional approaches to treat various cancers include chemotherapy, radiation and/or hormonal therapy. While these therapies continue to be effective in large part, they are not selective and highly toxic. There have been encouraging results in alternative therapeutic approach called antibody-mediated anti-cancer therapy, which is less toxic, more selective, and can also reverse drug/radiation resistance. Monoclonal antibodies or mAbs can be used to destroy malignant tumor cells and prevent tumor growth by blocking specific cell receptors. mAbs can bind only to cancer cell-specific antigens and induce an immunological response against the target cancer cell. The book[...]

Features

The current application of antibody-mediated targeted therapy against cancer has resulted in significant objective clinical responses, prolongation of survival and even cures. More than 20 mAbs have been approved for human use targeting a range of different cancers. However, a major drawback of mAb therapeutics is that a subset of patients does not initially respond and another initially responding subset [...]

Contents

Preface.- Introduction and generation of chimeric and humanized mAbs.- mAbs targeted against cancer cells and antibodies targeted against the tumor microenvironment.- Antibodies directed against different major cancers: Effects when used alone or in combination with drugs.- Mechanisms of antibody-mediated responses, in vitro and in vivo.- Molecular Pathways.- Molecular Signatures.- Identification of resistance targets for intervention.- Various chemicals that can sensitize resistant tumor cells.- Other mAbs.- Proteasome inhibitors.- Divalent mAbs.- Antibodies coupled to chemical[...]

Fields of interest

Cancer Research; Molecular Medicine; Immunology; Antibodies

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7653-5

Hardcover

2013. XIII, 202 p. 29 illus., 15 illus. in color. (Resistance to Targeted Anti-Cancer Therapeutics, Vol. 2)

\$189.00

ISBN 978-1-4614-7653-5

usually dispatched within 3 to 5 business days

A. Prokop, B. Csukas, Kaposvár University, Kaposvár, Hungary (Eds.)

Systems Biology

Integrative Biology and Simulation Tools

Growth in the pharmaceutical market has slowed down – almost to a standstill. One reason is that governments and other payers are cutting costs in a faltering world economy. But a more fundamental problem is the failure of major companies to discover, develop and market new drugs. Major drugs losing patent protection or being withdrawn from the market are simply not being replaced by new therapies – the pharmaceutical market model is no longer functioning effectively and most pharmaceutical companies are failing to produce the innovation needed for success. This multi-authored new book looks at a vital strategy which can bring innovation to a market in need of new ideas and new[...]

Features

Growth in the pharmaceutical market has slowed down – almost to a standstill. One reason is that governments and other payers are cutting costs in a faltering world economy. But a more fundamental problem is the failure of major companies to discover, develop and market new drugs. Major drugs losing patent protection or being withdrawn from the market are simply not being replaced by new therapies – the [...]

Contents

Functional genomics, proteomics, metabolomics and bioinformatics for systems biology.- Comparing biological networks: a survey on graph classifying techniques.- Emergent properties of gene regulatory networks – models and data.- Regulatory crosstalk analysis of biochemical networks in the nucleus accumbens.- Properties of biological networks.- Network analysis for systems biology.- Computational approaches for reconstruction of time-varying biological networks from Omics data.- Probabilistic graphical modeling in systems biology: a framework for integrative approaches.- Innovations of[...]

Fields of interest

Biomedicine (general); Microbial Genetics and Genomics; Simulation and Modeling; Biomedical Engineering

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-6802-4

Hardcover

2013. XXXI, 553 p. 105 illus., 53 illus. in color.

\$209.00

ISBN 978-94-007-6802-4

usually dispatched within 3 to 5 business days

L.D. Longo

The Rise of Fetal and Neonatal Physiology

Basic Science to Clinical Care

During the mid- to late-twentieth century, study of the physiology of the developing fetus and newborn infant evolved rapidly to become a major discipline in the biomedical sciences. Initially of interest from a standpoint of function of the placenta and oxygenation of the fetus, the field advanced to explore both normal functional mechanisms as well as pathophysiological aspects of their regulation. Examples include studying the role and regulation of circulatory vascular anatomic shunts in oxygenation, cardiac function, certain aspects of asphyxia in the fetus and newborn infant, the role of fetal "breathing" movements, cyclic electroencephalographic activity, and analysis of[...]

Features

During the mid- to late-twentieth century, study of the physiology of the developing fetus and newborn infant evolved rapidly to become a major discipline in the biomedical sciences. Initially of interest from a standpoint of function of the placenta and oxygenation of the fetus, the field advanced to explore both normal functional mechanisms as well as pathophysiological aspects of their regulation. Examples [...]

Contents

Introduction.- A Scientific Genealogy: The Development of Fetal-Neonatal Research.- Oxford and the Development of Physiology, with Notes on the Nuffield Institute.- Geoffrey S. Dawes: A Life in Science.- Dawes and Fetal Asphyxia: The Primate Colony in Puerto Rico.- Dawes, the Pulmonary Vasculature and his Foetal and Neonatal Physiology.- Embryology and Early Developmental Physiology.- Some Aspects of the Physiology of the Placenta.- Governmental Support of Research in Fetal and Newborn Physiology.- Fetal-Neonatal Growth and Metabolism.- Epigenetics and the Fetal Origins of Adult Health[...]

Fields of interest

Human Physiology; History of Medicine; Reproductive Medicine; Obstetrics / Perinatology; Biomedicine (general)

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-7920-8

Hardcover

2013. XXVII, 533 p. 52 illus., 18 illus. in color. (Perspectives in Physiology)

\$209.00

ISBN 978-1-4614-7920-8

usually dispatched within 3 to 5 business days

T.-L. Lee, The Chinese University of Hong Kong, Hong Kong, China (P.R.); A.C. Shui Luk (Eds.)

Tiling Arrays

Methods and Protocols

In Tiling Arrays: Methods and Protocols, expert researchers in the field detail many of the methods which are now commonly used to study tiling microarrays in genomic discovery. These include methods and applications for transcriptional regulation, expression, genetic and epigenetic regulation, as well as techniques and skills on tiling microarray data analysis. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and key tips on troubleshooting and avoiding known pitfalls. Authoritative and[...]

Features

In Tiling Arrays: Methods and Protocols, expert researchers in the field detail many of the methods which are now commonly used to study tiling microarrays in genomic discovery. These include methods and applications for transcriptional regulation, expression, genetic and epigenetic regulation, as well as techniques and skills on tiling microarray data analysis. Written in the highly successful [...]

Contents

A Brief Introduction to Tiling Microarrays: Principles, Concepts, and Applications.- Design of Tiling Arrays and their Application to Bacterial Transcriptome Analysis.- Transcript Profiling in Arabidopsis with Genome Tiling Microarrays.- Genome-wide Analysis of Transcription Factor Binding Sites in Skeletal Muscle Cells using ChIP-seq.- Analysis of Allele-Specific Gene Expression Using a Target-Oriented Tiling Microarray Assay.- Detection of Epigenetic Alterations Using Tiling Arrays.- Investigating Gene Promoter Methylation in a Mouse Model of Status Epilepticus.- Integrative Analysis[...]

Fields of interest

Human Genetics; Microarrays

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-606-1

Hardcover

2013. XI, 236 p. 53 illus., 37 illus. in color. (Methods in Molecular Biology, Vol. 1067)

\$119.00

ISBN 978-1-62703-606-1

usually dispatched within 3 to 5 business days

L.A. Coward, Australian National University, Canberra, Australia

Towards a Theoretical Neuroscience: from Cell Chemistry to Cognition

The book explains how to understand cognition in terms of brain anatomy, physiology and chemistry, using an approach adapted from techniques for understanding complex electronic systems. These techniques create hierarchies of information process based descriptions on different levels of detail, where higher levels contain less information and can therefore describe complete cognitive phenomena, but are more approximate. The nature of the approximations are well understood, and more approximate higher level descriptions can therefore be mapped to more precise detailed descriptions of any part of a phenomenon as required. Cognitive phenomena, the anatomy and connectivity of major brain[...]

Features

An effective theoretical neuroscience must deliver an accurate, comprehensible and intuitively satisfying understanding of higher cognition in terms of anatomy, neuron physiology and neurochemistry. Massive simulations of assemblies of relatively realistic neurons do not necessarily contribute to understanding, because such simulations can be just one more complex system that is not understood in any [...]

Contents

The nature of scientific understanding.- Higher Cognition.- Brain Anatomy.- Neuron Physiology.- Intracellular message chains.- Major Anatomical Structures.- Constraints on the physical architecture of the brain.- Appearance of architectural constraints in the brain.- Memory and the organisation of experience.- Attention and working memory.- Understanding complex cognitive phenomena.- Towards a Theoretical Neuroscience.

Fields of interest

Biomedicine (general); Neuropsychology; Neurosciences; Neurochemistry; Computer Systems Organization and Communication Networks

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-7106-2

Hardcover

2013. XX, 443 p. 130 illus., 28 illus. in color. (Springer Series in Cognitive and Neural Systems, Vol. 8)

\$189.00

ISBN 978-94-007-7106-2

usually dispatched within 3 to 5 business days

Y. Sugiyama, B. Steffansen (Eds.)

Transporters in Drug Development

Discovery, Optimization, Clinical Study and Regulation

Transporters in Drug Development examines how membrane transporters can be dealt with in academic-industrial drug discovery and pharmaceutical development as well as from a regulatory perspective. The book describes methods and examples of in vitro characterization of single transporters in the intestines, liver and kidneys as well as characterization of substrate overlap between various transporters. Furthermore, probes and biomarkers are suggested for studies of the transporters' impact on the pharmacokinetics of drug substrates/candidates interacting on transporters. The challenges of translating in vitro observed interaction of transporters into in vivo relevance are explored, and[...]

Features

Transporters in Drug Development examines how membrane transporters can be dealt with in academic-industrial drug discovery and pharmaceutical development as well as from a regulatory perspective. The book describes methods and examples of in vitro characterization of single transporters in the intestines, liver and kidneys as well as characterization of substrate overlap between various [..]

Contents

Membrane Transporters in ADME.- In Vitro Characterization of Transporter Mediated Permeability.- In Vitro Characterization of Interactions with Drug Transporting Proteins.- In Vivo Characterization of Interactions on Transporters.- Application of Targeted Proteomics in ADME for IVIVE.- Prediction of Transporter Mediated Drug-Drug Interaction from In Vitro Data.- Accounting for Transporters in Renal Clearance: Towards a Mechanistic Kidney Model (Mech KiM).- Analysis of Intestinal Transporters.- Analysis of Hepatic Transport Proteins.- Analysis of Renal Transporters.- The Role of[...]

Fields of interest

Pharmaceutical Sciences / Technology; Biomedicine (general)

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8228-4

Hardcover

2013. XIII, 317 p. 49 illus., 21 illus. in color. (AAPS Advances in the Pharmaceutical Sciences Series, Vol. 7) **\$189.00**

ISBN 978-1-4614-8228-4

usually dispatched within 3 to 5 business days

M.A. Hayat, Kean University, Union, USA (Ed.)

Tumors of the Central Nervous System, Volume 11

Pineal, Pituitary, and Spinal Tumors

Like the ten preceding volumes in the series Tumors of the Central Nervous System, this book is distinguished for its comprehensive approach, its distinguished roster of some 93 contributors representing 8 different countries and its embrace of leading-edge technology and methods. Volume 11: Pineal, Pituitary, and Spinal Tumors concentrates on the diagnosis, prognosis and therapy of four types of tumors, namely Glioblastoma, Meningioma, Schwannoma and Spinal Tumors. The book offers an in-depth survey of a range of new technologies and their applications to tumor diagnosis, treatment and therapy assessment. The contributors explain in thorough detail a range of current and newly[...]

Features

Like the ten preceding volumes in the series Tumors of the Central Nervous System, this book is distinguished for its comprehensive approach, its distinguished roster of some 93 contributors representing 8 different countries and its embrace of leading-edge technology and methods. Volume 11: Pineal, Pituitary, and Spinal Tumors concentrates on the diagnosis, prognosis and therapy of four types of [..]

Contents

Preface. I Imaging.- An introduction to brain tumor imaging.-Molecular imaging of brain tumors.- Use of 11c-4dst-pet for imaging of human brain tumors. II Glioma and glioblastoma.- Diffusion tensor magnetic resonance imaging-based tractography for glioma surgery.- Angiocentric glioma, pilomyxoid astrocytoma, and Pituitaryoma: new entities in the world health organization classification.- Diffuse intrinsic pontine gliomas in children: treatment (an Update).- Gliomatosis cerebri: implications of genetic findings.- Impact of bevacizumab chemotherapy on glioblastomas.- Glioblastoma[...]

Fields of interest

Cancer Research; Oncology; Biomedicine (general)

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7036-2

Hardcover

2014. XLV, 371 p. 56 illus., 37 illus. in color. (Tumors of the Central Nervous System, Vol. 11)

\$209.00

ISBN 978-94-007-7036-2

usually dispatched within 3 to 5 business days

S.M. Bailer, University of Stuttgart, Stuttgart, Germany; D. Lieber, Ulm University Medical Center, Ulm, Germany (Eds.)

Virus-Host Interactions

Methods and Protocols

Virus-Host Interactions: Methods and Protocols covers various aspects of virological research, such as biochemical approaches, including molecular interactions and regulatory mechanisms on the protein as well as the RNA level with a strong focus on the manifold possibilities to study protein-protein interactions, as well as cell biological and immunological methodologies. Viruses represent a reduced form of life that depends on host cells for propagation. To this end, viruses approach and penetrate cells and usurp cellular machineries for their own benefit. Recent technological improvements have enabled the systematic analysis of the virus-host interplay be it on the genomic, the[...]

Features

Virus-Host Interactions: Methods and Protocols covers various aspects of virological research, such as biochemical approaches, including molecular interactions and regulatory mechanisms on the protein as well as the RNA level with a strong focus on the manifold possibilities to study protein-protein interactions, as well as cell biological and immunological methodologies. Viruses represent a reduced [..]

Contents

A High-Throughput Yeast Two Hybrid Protocol to Determine Virus-Host Protein Interactions.- Analysis of Protein-Protein Interactions Using LUMIER Assay.- Detection of Protein Interactions During Virus Infection by Bimolecular Fluorescence Complementation.- Discovery of Host-Viral Protein Complexes During Infection.- Screening for Host Proteins with Pro- and Antiviral Activity Using High-Throughput RNAi.- High Resolution Gene Expression Profiling of RNA Synthesis, Processing and Decay by Metabolic Labelling of Newly Transcribed RNA using 4-thiouridine.- Isolation and Characterization of[...]

Fields of interest

Immunology; Virology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-600-9

Hardcover

2013. X, 372 p. 66 illus., 45 illus. in color. (Methods in Molecular Biology, Vol. 1064)

\$139.00

ISBN 978-1-62703-600-9

usually dispatched within 3 to 5 business days

R.G. Gourdie, T.A. Myers (Eds.)

Wound Regeneration and Repair

Methods and Protocols

In Wound Regeneration and Repair: Methods and Protocols, expert researchers in the field detail classical and cutting-edge methods for studying wound healing and regeneration. These techniques include cellular and molecular methods, genetic approaches, surgical procedures, clinical advances, drug discovery and delivery modalities, animal and humanized models and new applications in the treatment of pathological wounds in a variety of organs and tissues. Written in the highly successful Methods in Molecular Biology series format, chapters include an introduction to their respective topics, a detailed list of the necessary materials and reagents for each procedure, step-by-step, [...]

Features

In Wound Regeneration and Repair: Methods and Protocols, expert researchers in the field detail classical and cutting-edge methods for studying wound healing and regeneration. These techniques include cellular and molecular methods, genetic approaches, surgical procedures, clinical advances, drug discovery and delivery modalities, animal and humanized models and new applications in the treatment of [...]

Contents

An In Vivo Model System for Evaluation of the Host Response to Biomaterials.- Urothelial Cell Culture.- Cell Populated Collagen Lattices Contraction Model for the Investigation of Fibroblast Collagen Interactions.- A Tissue-engineered Corneal Wound Healing Model for the Characterization of Reepithelialization.- Adult Stem Cells in Small Animal Wound Healing Models.- Novel Animal Models for Tracking the Fate and Contributions of Bone Marrow Derived Cells in Diabetic Healing.- Cell-Based Therapies for Myocardial Repair: Emerging Role for Bone Marrow Derived Mesenchymal Stem Cells (MSCs) in [...]

Fields of interest

Molecular Medicine; Regenerative Medicine/Tissue Engineering

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-504-0

Hardcover

2013. XVIII, 585 p. 122 illus., 102 illus. in color. (Methods in Molecular Biology, Vol. 1037)

\$159.00

ISBN 978-1-62703-504-0

usually dispatched within 3 to 5 business days

Chemistry

M. Hotokka, E.J. Brändas, Uppsala University, Uppsala, Sweden; J. Maruani, Laboratoire de Chimie Physique, Paris, France; G. Delgado-Barrio, CSIC, Madrid, Spain (Eds.)

Advances in Quantum Methods and Applications in Chemistry, Physics, and Biology

Advances in Quantum Methods and Applications in Chemistry, Physics, and Biology includes peer-reviewed contributions based on carefully selected presentations given at the 17th International Workshop on Quantum Systems in Chemistry, Physics, and Biology. New trends and state-of-the-art developments in the quantum theory of atomic and molecular systems, and condensed matter (including biological systems and nanostructures) are described by academics of international distinction.

Features

Advances in Quantum Methods and Applications in Chemistry, Physics, and Biology includes peer-reviewed contributions based on carefully selected presentations given at the 17th International Workshop on Quantum Systems in Chemistry, Physics, and Biology. New trends and state-of-the-art developments in the quantum theory of atomic and molecular systems, and condensed matter (including biological [...])

Contents

Concepts and Methods in Quantum Chemistry.-Relativistic Effects in Quantum Chemistry.- Molecular Structure, Dynamics, and Spectroscopy.- Atoms and Molecules in Strong Electric and Magnetic Fields.- Reactive Collisions and Chemical Reactions.- Condensed Matter; Complexes and Clusters; Surfaces and Interfaces.- Molecular and Nano-Materials, Electronics and Biology.- Computational Chemistry, Physics and Biology.- Catalysis.

Fields of interest

Theoretical and Computational Chemistry; Condensed Matter Physics; Computer Applications in Life Sciences; Nanotechnology; Catalysis

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-01528-6

Hardcover

2013. XV, 379 p. 133 illus., 87 illus. in color. (Progress in Theoretical Chemistry and Physics, Vol. 27)

\$349.00

ISBN 978-3-319-01528-6

usually dispatched within 3 to 5 business days

P.L. Marek

Biomimetic Dye Aggregate Solar Cells

This thesis describes a new approach to the construction of solar cells. Following nature's example, this approach has the goal to find a biomimetic self-assembling dye, whose aggregates can mimic the natural light-harvesting system of special photosynthetic active bacteria. The thesis investigates methods to control the self-assembly such that suitable dye aggregates are formed with high internal order and size-confinement. The dye aggregates can be implemented into a new type of solar cells, designed to combine the advantages of hybrid solar cells and solid-state dye-sensitized solar cells (ss-DSSCs): dye aggregate solar cells (DASCs). This book describes the construction and first [...]

Features

This thesis describes a new approach to the construction of solar cells. Following nature's example, this approach has the goal to find a biomimetic self-assembling dye, whose aggregates can mimic the natural light-harvesting system of special photosynthetic active bacteria. The thesis investigates methods to control the self-assembly such that suitable dye aggregates are formed with high [...]

Contents

Theory and Literature Survey: Biomimetic Light-Harvesting.- Controlling the Self-Assembly of Zinc Porphyrin P2.- Conclusion: Biomimetic Light-Harvesting.- Theory and Literature Survey: Application of BLH to Solar Cells.- Construction of Solar Cells.- Results and Discussion: Application of BLH to Solar Cells.- Conclusion: Application of BLH to Solar Cells.

Fields of interest

Nanochemistry; Energy Harvesting; Optical and Electronic Materials; Nanoscale Science and Technology

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00635-2

Hardcover

2013. XX, 163 p. 87 illus., 44 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-00635-2

usually dispatched within 3 to 5 business days

A.J. Logsdail, University College London, London, United Kingdom

Computational Characterisation of Gold Nanocluster Structures

In this thesis, Andrew Logsdail demonstrates that computational chemistry is a powerful tool in contemporary nanoscience, complementing experimental observations and helping guide future experiments. The aim of this particular PhD is to further our understanding of structural and compositional preferences in gold nanoparticles, as well as the compositional and chemical ordering preferences in bimetallic nanoalloys formed with other noble metals, such as palladium and platinum. Highlights include: calculations of the structural preferences and optical-response of gold nanoparticles and gold-containing nanoalloys; the design and implementation of novel numerical algorithms for the[...]

Features

In this thesis, Andrew Logsdail demonstrates that computational chemistry is a powerful tool in contemporary nanoscience, complementing experimental observations and helping guide future experiments. The aim of this particular PhD is to further our understanding of structural and compositional preferences in gold nanoparticles, as well as the compositional and chemical ordering preferences in bimetallic [...]

Contents

From the Contents: Calculating the Structural Preference of High Symmetry Clusters for PdN, AuN, and (PdAu)N.- Method Development for comparing Scanning Transmission Electron Microscope Images to Theoretical Structures.- A First-Principles Study of the Soft-landing of Au16 on Graphite.

Fields of interest

Theoretical and Computational Chemistry; Nanochemistry; Catalysis

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01492-0

Hardcover

2013. XVI, 209 p. 99 illus., 84 illus. in color. (Springer Theses)

\$179.00

ISBN 978-3-319-01492-0

usually dispatched within 3 to 5 business days

S. Parveen, Chinese Academy of Sciences, Changchun, China (P.R.); M.S. Aslam, University of the Punjab, Lahore, Pakistan; L. Hu, Changchun Institute of Applied Chemistry, Changchun, China (P.R.); G. Xu, Chinese Academy of Sciences, Changchun, China (P.R.)

Electrogenerated Chemiluminescence

Protocols and Applications

This book primarily focuses on the fundamentals of and new developments in electrochemiluminescence (ECL), presenting high-quality content and explicitly aiming to summarize and disseminate the current state-of-the-art. The topics covered include the fundamental theory, mechanism, types of reactions involved, and the instrumental techniques. The book also examines the applications of ECL in many of the emerging fields of science, such as bioanalytical, analytical, clinical, pharmaceutical, forensic, military, microchip, μ TAS, and LED. It will be invaluable to bioanalysts, drug analysts, pharmaceutical researchers and other professionals worldwide, as well as to other interested readers.

Features

This book primarily focuses on the fundamentals of and new developments in electrochemiluminescence (ECL), presenting high-quality content and explicitly aiming to summarize and disseminate the current state-of-the-art. The topics covered include the fundamental theory, mechanism, types of reactions involved, and the instrumental techniques. The book also examines the applications of ECL in many of the [...]

Contents

Introduction.- Generation Pathways of Electrogenerated Chemiluminescence.- ECL Instrumentation.- ECL Luminophores.- Coupling of ECL with Different Techniques.- Quenching of ECL.- Applications of Electrochemiluminescence.

Fields of interest

Spectroscopy / Spectrometry; Electrochemistry; Atomic/Molecular Structure and Spectra; Biotechnology

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-642-39554-3

Softcover

2013. XIII, 152 p. 54 illus., 22 illus. in color. (Springer-Briefs in Molecular Science)

\$49.95

ISBN 978-3-642-39554-3

usually dispatched within 3 to 5 business days

A. Naipally, K. Rosselot

Environmental Engineering: Review for the Professional Engineering Examination

This book will help the reader expand further into chemical engineering and become a licensed professional engineer (PE), which can offer a tremendous boost to one's career, as there are certain career opportunities available only to licensed engineers. Licensure demonstrates high standards of professionalism, knowledge, and ability. Because of the work experience requirement, PE examinees have generally been out of school for some time. This book summarizes the theoretical background of topics covered in the exam, which will help potential examinees refresh their memories on subjects they may not have been exposed to since their undergraduate classes. Another advantage of using this[...]

Features

This review will help candidates prepare for the Principles and Practice of Engineering Examination in the area of Environmental Engineering by refreshing their memory of key concepts and theory. In addition to a review of theory, two practice exams following the multiple choice format used by the PE exam are supplied with solutions to every problem. The material covered in the book and tested in the [...]

Contents

Water and wastewater.- Groundwater, soils, and remediation.- Air.- Solid waste.- Hazardous waste.- Environmental assessments and emergency response.- Error and uncertainty in environmental measurements.- Exam 1.- Exam 1 Solutions.- Exam 2.- Exam 2 Solutions.

Fields of interest

Industrial Chemistry / Chemical Engineering; Engineering (general)

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-0-387-29072-0

Hardcover

2013. IX, 274 p. 34 illus.

\$79.99

ISBN 978-0-387-29072-0

usually dispatched within 3 to 5 business days

A. Patel, Maharaja Sayajirao University of Baroda, Gujarat, India (Ed.)

Environmentally Benign Catalysts

For Clean Organic Reactions

Over the past twenty years, Catalysis by Heteropolyacids (HPAs) has received wide attention and led to new and promising developments both at academic and industrial level. In particular, heterogeneous catalysis is particularly attractive because it generally satisfies most of green chemistry's requirements. By emphasizing the development of third generation catalysts, this volume presents trends and opportunities in academic and industrial research. The book appeals to postgraduates, researchers, and chemists working in the field of environmentally benign catalysts as well as catalytic processes.

Features

Over the past twenty years, Catalysis by Heteropolyacids (HPAs) has received wide attention and led to new and promising developments both at academic and industrial level. In particular, heterogeneous catalysis is particularly attractive because it generally satisfies most of green chemistry's requirements. By emphasizing the development of third generation catalysts, this volume presents trends and [...]

Contents

Introduction.- Heteropoly compounds as ammoxidation catalysts.- Transition metal substituted salt of tungsten based polyoxometalates supported mesoporous silica as a Catalyst for Organic Transformation reactions.- Vanadium substituted tustophosphoric acid supported on titania: A heterogeneous catalyst for selective oxidative cleavage of olefins to carbonyl compounds at room temperature.- Supported Heteropoly Acids and Multi-component Polyoxometalates as Eco-Friendly Solid Catalysts for Bulk and Fine Chemicals Synthesis.- Glycerol Etherification with light Alcohols Promoted by Supported [...]

Fields of interest

Catalysis; Industrial Chemistry / Chemical Engineering; Organic Chemistry; Environmental Chemistry

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-6709-6

Hardcover

Jointly published with Panch Tattva Publishers, Pune, India

2013. X, 263 p. 205 illus., 148 illus. in color.

\$129.00

ISBN 978-94-007-6709-6

usually dispatched within 3 to 5 business days

A.J. Ceulemans, Katholieke Universiteit Leuven, Leuven, Belgium

Group Theory Applied to Chemistry

Chemists are used to the operational definition of symmetry, which crystallographers introduced long before the advent of quantum mechanics. The ball-and-stick models of molecules naturally exhibit the symmetrical properties of macroscopic objects. However, the practitioner of quantum chemistry and molecular modeling is not concerned with balls and sticks, but with subatomic particles: nuclei and electrons. This textbook introduces the subtle metaphors which relate our macroscopic understanding of symmetry to the molecular world. It gradually explains how bodily rotations and reflections, which leave all inter-particle distances unaltered, affect the study of molecular phenomena that [...]

Features

Chemists are used to the operational definition of symmetry, which crystallographers introduced long before the advent of quantum mechanics. The ball-and-stick models of molecules naturally exhibit the symmetrical properties of macroscopic objects. However, the practitioner of quantum chemistry and molecular modeling is not concerned with balls and sticks, but with subatomic particles: nuclei and electrons. [...]

Contents

Operations.- Function spaces and matrices.- Groups.- Representations.- What has quantum chemistry got to do with it?.- Interactions.- Spherical symmetry and spins.

Fields of interest

Theoretical and Computational Chemistry; Crystallography; Inorganic Chemistry

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-94-007-6862-8

Hardcover

2013. XIII, 269 p. 63 illus., 11 illus. in color. (Theoretical Chemistry and Computational Modelling)

\$89.99

ISBN 978-94-007-6862-8

usually dispatched within 3 to 5 business days

C.G.J. Baker (Ed.)

Handbook of Food Factory Design

Food manufacturing has evolved over the centuries from kitchen industries to modern, sophisticated production operations. A typical food factory includes the food processing and packaging lines, the buildings and exterior landscaping, and the utility-supply and waste-treatment facilities. As a single individual is unlikely to possess all the necessary skills required to facilitate the design, the task will undoubtedly be undertaken by an interdisciplinary team employing a holistic approach based on a knowledge of the natural and biological sciences, most engineering disciplines, and relevant legislation. In addition, every successful project requires a competent project manager to [...]

Features

Food manufacturing has evolved over the centuries from kitchen industries to modern, sophisticated production operations. A typical food factory includes the food processing and packaging lines, the buildings and exterior landscaping, and the utility-supply and waste-treatment facilities. As a single individual is unlikely to possess all the necessary skills required to facilitate the design, the task will [...]

Contents

Introduction.- Part I. Process Considerations.- Process Specifications.- Food Processing Equipment.- Hygienic Design of Food-Processing Equipment.- Movement of Materials.- Productivity Issues: Industrial and Operations Management.- Safety and Health.- Protecting the Environment.- Control and Monitoring of Food Manufacturing Processes.- Use of Computers in the Design of Food-Manufacturing Facilities.- Part II. Factory Infrastructure.- Site Considerations.- Design Principles.- Construction: Techniques and Finishes.- Part III. Utilities and Services.- Steam Systems.- Refrigeration [...]

Fields of interest

Food Science; Industrial Design; Industrial Chemistry / Chemical Engineering; Mechanical Engineering

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7449-4

Hardcover

2013. VIII, 504 p. 133 illus., 18 illus. in color.

\$119.00

ISBN 978-1-4614-7449-4

usually dispatched within 3 to 5 business days

N. Saito, Tohoku University, Sendai, Japan

Hierarchical Bottom-Up Methodology for Integrating Dynamic Ethynylhelicene Oligomers

Synthesis, Double Helix Formation, and the Higher Assembly Formation

In biological systems, molecules hierarchically form ordered assemblies and macroscopic substances, as exemplified by the assembly of proteins. The development of such systems using oligomeric macromolecules obtained by organic synthesis can provide insights into biological phenomena and will lead to the creation of new materials. In this regard, synthetic double helix molecules are attractive subjects of study because they have an important structural motif that appears widely in nature and can exhibit dynamic structural change. This thesis describes an unprecedented bottom-up approach using synthetic ethynylhelicene oligomers, which form dynamic double helices in organic media.[...]

Features

In biological systems, molecules hierarchically form ordered assemblies and macroscopic substances, as exemplified by the assembly of proteins. The development of such systems using oligomeric macromolecules obtained by organic synthesis can provide insights into biological phenomena and will lead to the creation of new materials. In this regard, synthetic double helix molecules are attractive subjects of [...]

Contents

From the contents: Introduction: Hierarchical Bottom-Up Methodology for Integrating.- Synthesis of Ethynylhelicene Oligomers.- Homo-Double Helix Formation of Ethynylhelicene Oligomers Possessing Various Side Chains.- Hetero-Double Helix Formation of Pseudoenantiomeric Ethynylhelicene Oligomers.- Higher Assembly Formation of Pseudoenantiomeric Ethynylhelicene Oligomers Conclusions.- Experimental Section.

Fields of interest

Organic Chemistry; Polymer Sciences; Nanotechnology

Target groups

Research

Type of publication

Ph.D. thesis

More on www.springer.com/978-4-431-54513-2

Hardcover

2013. XII, 89 p. 72 illus., 45 illus. in color. (Springer Theses)

\$99.00

ISBN 978-4-431-54513-2

usually dispatched within 3 to 5 business days

L.T. Kuhn, Europ. Neuroscience Institute Göttingen, Göttingen, Germany (Ed.)

Hyperpolarization Methods in NMR Spectroscopy

Elucidating Organic Reaction Mechanisms using photo-CIDNP Spectroscopy, by Martin Goez. Parahydrogen Induced Polarization by Homogeneous Catalysis: Theory and Applications, by Kerstin Münnemann et al. Improving NMR and MRI Sensitivity with Parahydrogen, by R. Mewis & Simon Duckett. The Solid-state Photo-CIDNP Effect, by Jörg Matysik et al. Parahydrogen-induced Polarization in Heterogeneous Catalytic Processes, by Igor Koptiyug et al. Dynamic Nuclear Polarization Enhanced NMR Spectroscopy, by U. Akbey & H. Oschkinat. Photo-CIDNP NMR Spectroscopy of Amino Acids and Proteins, by Lars T. Kuhn.

Features

Elucidating Organic Reaction Mechanisms using photo-CIDNP Spectroscopy, by Martin Goez. Parahydrogen Induced Polarization by Homogeneous Catalysis: Theory and Applications, by Kerstin Münnemann et al. Improving NMR and MRI Sensitivity with Parahydrogen, by R. Mewis & Simon Duckett. The Solid-state Photo-CIDNP Effect, by Jörg Matysik et al. Parahydrogen-induced Polarization in Heterogeneous Catalytic [...]

Contents

Elucidating Organic Reaction Mechanisms using photo-CIDNP Spectroscopy.- Parahydrogen Induced Polarization by Homogeneous Catalysis: Theory and Applications.- Improving NMR and MRI Sensitivity with Parahydrogen.- The Solid-state Photo-CIDNP Effect.- Parahydrogen-induced Polarization in Heterogeneous Catalytic Processes.- Dynamic Nuclear Polarization Enhanced NMR Spectroscopy.- Photo-CIDNP NMR Spectroscopy of Amino Acids and Proteins.

Fields of interest

Spectroscopy / Spectrometry; Spectroscopy and Microscopy; Catalysis

Target groups

Research

Type of publication

Reviews

More on www.springer.com/978-3-642-39727-1

Hardcover

2013. VII, 304 p. 138 illus., 16 illus. in color. (Topics in Current Chemistry, Vol. 338)

\$309.00

ISBN 978-3-642-39727-1

usually dispatched within 3 to 5 business days

N.C. Polfer, P. Dugourd (Eds.)

Laser Photodissociation and Spectroscopy of Mass-separated Biomolecular Ions

This lecture notes book presents how enhanced structural information of biomolecular ions can be obtained from interaction with photons of specific frequency - laser light. The methods described in the book "Laser photodissociation and spectroscopy of mass-separated biomolecular ions" make use of the fact that the discrete energy and fast time scale of photoexcitation can provide more control in ion activation. This activation is the crucial process producing structure-informative product ions that cannot be generated with more conventional heating methods, such as collisional activation. The book describes how the powerful separation capabilities and sensitivity of mass spectrometry[...]

Features

This lecture notes book presents how enhanced structural information of biomolecular ions can be obtained from interaction with photons of specific frequency - laser light. The methods described in the book "Laser photodissociation and spectroscopy of mass-separated biomolecular ions" make use of the fact that the discrete energy and fast time scale of photoexcitation can provide more [...]

Contents

Spectroscopy and the electromagnetic spectrum.- Light sources.- Ion traps.- Infrared photodissociation of biomolecular ions.- UV-visible activation of biomolecular ions.

Fields of interest

Mass Spectrometry; Spectroscopy and Microscopy; Physical Chemistry; Spectroscopy / Spectrometry; Biophysics and Biological Physics; Atomic/Molecular Structure and Spectra

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01251-3

Hardcover

2013. XI, 119 p. 79 illus., 36 illus. in color. (Lecture Notes in Chemistry, Vol. 83)

\$129.00

ISBN 978-3-319-01251-3

usually dispatched within 3 to 5 business days

M. Wirth

László Zechmeister

His Life and Pioneering Work in Chromatography

László Zechmeister was one of the pioneers in chromatology. He recognized the potential of the chromatographic method and made extensive use of it for his research about natural products. In 1938 he founded the book series "Progress in the Chemistry of Organic Natural Products" which includes review articles on contemporary research by masters in their fields of expertise. This text casts light on his life and his pioneering role in chromatography and provides more detailed insight on the book series.

Features

László Zechmeister was one of the pioneers in chromatology. He recognized the potential of the chromatographic method and made extensive use of it for his research about natural products. In 1938 he founded the book series "Progress in the Chemistry of Organic Natural Products" which includes review articles on contemporary research by masters in their fields of expertise. This text casts light on his life and [...]

Contents

The life of László Zechmeister.- Zechmeister's influence on the development of chromatography.- Hitherto mostly disregarded contributions to the development of the chromatographic method made by Austrian chemistry.- The series "Progress in the chemistry of Organic Natural Products - a closer look.

Fields of interest

Chromatography; Organic Chemistry; History of Science

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-00641-3

Softcover

2013. VIII, 61 p. (SpringerBriefs in History of Chemistry)

\$54.99

ISBN 978-3-319-00641-3

usually dispatched within 3 to 5 business days

M. Schnürch, Vienna University of Technology, Vienna, Austria; M.D. Mihovilovic, Vienna University of Technology, Vienna, Austria (Eds.)

Metalation of Azines and Diazines

Reactions of Pyridines, Benzopyridines and Azapyridines with Organomagnesiums and Organolithiums, by Manfred Schlosser Lithiations and Magnesiations on Quinoline and Isoquinoline, by Floris Chevallier, Florence Mongin Metalation Reactions of Pyridines, Quinolines, and Isoquinolines with Ate Bases and Their Alkali Metal Salt-Modified Congeners, by Costa Metallinos, Kathryn Stromski Lithiations and Grignard Reactions on Pyrimidine and Quinazoline, by Andrej Kolarovic Other Stoichiometric Metalation Reactions on Pyrimidine and Quinazoline, by Philippe C. Gros-Metalation of Pyrazine and Quinoxaline, by Nelly Plé, Corinne Fruit Metalation of Pyridazine, Cinnoline, and Phtalazine, by[...]

Features

Manfred Schlosser Reactions of Pyridines, Benzopyridines and Azapyridines with Organomagnesiums and Organolithiums Floris Chevallier Florence Mongin Lithiations and Magnesiations on Quinoline and Isoquinoline Costa Metallinos Kathryn Stromski Metalation Reactions of Pyridines, Quinolines, and Isoquinolines with Ate Bases and Their Alkali Metal [...]

Contents

Reactions of Pyridines, Benzopyridines and Azapyridines with Organomagnesiums and Organolithiums.- Lithiations and Magnesiations on Quinoline and Isoquinoline.- Metalation Reactions of Pyridines, Quinolines and Isoquinolines with ate Bases and their Alkali Metal Salt-Modified Congeners.- Lithiations and Grignard Reactions on Pyrimidine and Quinazoline.- Other stoichiometric metalation reactions on Pyrimidine and Quinazoline - Borylation, Stannylation, Zincation, Silylation, etc.- Metalation of Pyrazine and Quinoxaline.- Metalation of Pyridazine, Cinnoline, and Phtalazine.

Fields of interest

Organic Chemistry; Organometallic Chemistry

Target groups

Research

Type of publication

Reviews

More on www.springer.com/978-3-642-35021-4

Hardcover

2013. VII, 272 p. (Topics in Heterocyclic Chemistry, Vol. 31)

\$309.00

ISBN 978-3-642-35021-4

usually dispatched within 3 to 5 business days

Y. Matsuo, The University of Tokyo, Tokyo, Japan; M. Higuchi, National Institute for Materials Science, Tsukuba, Japan; Y. Negishi, Tokyo University of Science, Tokyo, Japan; M. Yoshizawa, T. Uemura, Kyoto University, Kyoto, Japan; H. Takaya, T. Ueno, Tokyo Institute of Technology, Yokohama, Japan; M. Takeuchi, National Institute for Materials Science, Tsukuba, Japan; S. Yoshimoto, Kumamoto University, Kumamoto, Japan (Eds.)

Metal-Molecular Assembly for Functional Materials

This book focuses on modern coordination chemistry, covering porous coordination polymers, metalloproteins, metalloproteins, nanoclusters, nanocapsules, aligned polymers, and fullerenes. As well, it deals with applications to electronic devices and surface characterization. These wide-ranging topics are integrally described from the perspectives of dimensionality (one-, two-, and three-dimension), new materials design, synthesis, molecular assembly, function and application. The nine chapters making up this book have been authored by scientists who are at the cutting edge of research in this particular field. The level is appropriate for graduate students, post-doc researchers, and [...]

Features

This book focuses on modern coordination chemistry, covering porous coordination polymers, metalloproteins, metalloproteins, nanoclusters, nanocapsules, aligned polymers, and fullerenes. As well, it deals with applications to electronic devices and surface characterization. These wide-ranging topics are integrally described from the perspectives of dimensionality (one-, two-, and three-dimension), new [...]

Contents

Molecular Assembly and Organization of Fullerenes for Photoelectric Conversion.- Organic-Metallic Hybrid Polymers for Electrochromic Display Devices.- Precisely Controlled Metal Nanoclusters.- Coordination Nanocages for Engineering Discrete Aromatic Stacks.- Coordination Nanochannels for Polymer Materials.- Synthesis and Functions of Metalloproteins.- Coordination Chemistry in Self-assembly Proteins.- Two-Dimensional Alignment of Conjugated Polymers.- Nanoscale Surface Science on Two-Dimensional Molecular Assembly.

Fields of interest

Inorganic Chemistry; Nanotechnology; Nanotechnology and Microengineering; Energy Storage; Polymer Sciences; Biotechnology

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-4-431-54369-5

Softcover

2013. VII, 90 p. 53 illus., 33 illus. in color. (SpringerBriefs in Molecular Science)

\$54.99

ISBN 978-4-431-54369-5

usually dispatched within 3 to 5 business days

A.J.J. Lennox

Organotrifluoroborate Preparation, Coupling and Hydrolysis

Alistair Lennox's thesis reports on the reactivity of organotrifluoroborates, which are becoming increasingly important reagents in synthesis. The thesis is divided into three sections. The first section describes a method for preparing organotrifluoroborates. The second section reports on a mechanistic investigation into the main application of RBF3K reagents as coupling partners in Suzuki-Miyaura coupling, phenomena identified as arising from organotrifluoroborate hydrolysis and fluoride release. The final section reports on a detailed investigation into the hydrolysis mechanism, a prerequisite for their Suzuki-Miyaura coupling, and how it may be predicted and controlled. This[...]

Features

Alistair Lennox's thesis reports on the reactivity of organotrifluoroborates, which are becoming increasingly important reagents in synthesis. The thesis is divided into three sections. The first section describes a method for preparing organotrifluoroborates. The second section reports on a mechanistic investigation into the main application of RBF3K reagents as coupling partners in Suzuki-Miyaura coupling, [...]

Contents

General Introduction.- Organotrifluoroborate Preparation.- Organotrifluoroborate Coupling.- Organotrifluoroborate Hydrolysis.- Conclusions and Future Work.- Experimental: General Experimental Details.- Experimental: Organotrifluoroborate Preparation.- Experimental: Organotrifluoroborate Coupling.- Experimental: Organotrifluoroborate Hydrolysis.

Fields of interest

Organic Chemistry; Catalysis; Industrial Chemistry / Chemical Engineering

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01133-2

Hardcover

2013. XV, 223 p. 308 illus., 96 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-01133-2

usually dispatched within 3 to 5 business days

Z. Chen, Stanford University, Stanford, USA; H. Dinh, National Renewable Energy Laboratory, Golden, USA; E. Miller, U.S. Department of Energy, Washington, USA

Photoelectrochemical Water Splitting

Standards, Experimental Methods, and Protocols

This book outlines many of the techniques involved in materials development and characterization for photoelectrochemical (PEC) – for example, proper metrics for describing material performance, how to assemble testing cells and prepare materials for assessment of their properties, and how to perform the experimental measurements needed to achieve reliable results towards better scientific understanding. For each technique, proper procedure, benefits, limitations, and data interpretation are discussed. Consolidating this information in a short, accessible, and easy to read reference guide will allow researchers to more rapidly immerse themselves into PEC research and also better[...]

Features

This book outlines many of the techniques involved in materials development and characterization for photoelectrochemical (PEC) – for example, proper metrics for describing material performance, how to assemble testing cells and prepare materials for assessment of their properties, and how to perform the experimental measurements needed to achieve reliable results towards better scientific understanding. For [...]

Contents

Introduction.- Efficiency Definitions.- Experimental Conditions.- PEC Characterization Flowchart.- UV-Vis Optical Characterization.- Flatband Potential Measurement Techniques.- Incident Photon-to-current Conversion Efficiency/Photocurrent Spectroscopy.- 2-Electrode Short Circuit Current Density.- Hydrogen Detection.- Stability Testing.- Index.

Fields of interest

Electrochemistry; Energy Harvesting; Optical and Electronic Materials

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8297-0

Softcover

2013. X, 126 p. 44 illus., 40 illus. in color. (SpringerBriefs in Energy)

\$54.99

ISBN 978-1-4614-8297-0

usually dispatched within 3 to 5 business days

G. Liu, University of Science and, Hefei, China (P.R.); G. Zhang, South China University of Technology, Guangzhou, China (P.R.)

QCM-D Studies on Polymer Behavior at Interfaces

QCM-D Studies on Polymer Behavior at Interfaces reviews the applications of quartz crystal microbalance with dissipation (QCM-D) in polymer research, including the conformational change of grafted polymer chains, the grafting kinetics of polymer chains, the growth mechanism of polyelectrolyte multilayers, and the interactions between polymers and phospholipid membranes. It focuses on how QCM-D can be applied to the study of polymer behavior at various solid-liquid interfaces. Moreover, it clearly reveals the physical significance of the changes in frequency and dissipation associated with the different polymer behaviors at the interfaces.

Features

QCM-D Studies on Polymer Behavior at Interfaces reviews the applications of quartz crystal microbalance with dissipation (QCM-D) in polymer research, including the conformational change of grafted polymer chains, the grafting kinetics of polymer chains, the growth mechanism of polyelectrolyte multilayers, and the interactions between polymers and phospholipid membranes. It focuses on how QCM-D can be [...]

Contents

Basic Principles of QCM-D.- Conformational Change of Grafted Polymer Chains.- Grafting Kinetics of Polymer Chains.- Growth Mechanism of Polyelectrolyte Multilayers.- Interactions between Polymers and Phospholipid Membranes.

Fields of interest

Polymer Sciences; Surface and Interface Science, Thin Films; Surfaces and Interfaces, Thin Films; Electrochemistry

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-642-39789-9

Softcover

2013. VIII, 81 p. 59 illus., 19 illus. in color. (SpringerBriefs in Molecular Science)

\$54.99

ISBN 978-3-642-39789-9

usually dispatched within 3 to 5 business days

K.M. Polizzi, C. Kontoravdi (Eds.)

Synthetic Biology

In Synthetic Biology, expert researchers in the field provide the latest developments in molecular biology techniques used in Synthetic Biology.

Focusing on computational tools that will aid in systematising the design and construction of parts and systems. Written in the highly successful "Methods in Molecular Biology" series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and key tips on troubleshooting and avoiding known pitfalls. Authoritative and practical, Synthetic Biology seeks to aid scientists in the further study of developing new biological components[...]

Features

In Synthetic Biology, expert researchers in the field provide the latest developments in molecular biology techniques used in Synthetic Biology. Focusing on computational tools that will aid in systematising the design and construction of parts and systems. Written in the highly successful "Methods in Molecular Biology" series format, chapters include introductions to their respective topics, [...]

Contents

What is Synthetic Biology?.- Gene Synthesis Method Based on Overlap Extension PCR and DNAWorks Program.- BioBrick™ Assembly Using the In-Fusion PCR Cloning Kit.- Overlap Extension PCR Cloning.- One-Step Isothermal Assembly of DNA Fragments.- Creation and Characterization of Component Libraries for Synthetic Biology.- In vivo and in vitro Characterisation of s70 Constitutive Promoter BioParts by Real-time PCR and Fluorescent Measurements.- In Vivo Screening of Artificial Small RNAs for Silencing Endogenous Genes in *Escherichia coli*.- Construction and Engineering of Large Biochemical[...]

Fields of interest

Biotechnology; Biochemical Engineering

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-624-5

Hardcover

2013. X, 226 p. 80 illus., 48 illus. in color. (Methods in Molecular Biology, Vol. 1073)

\$119.00

ISBN 978-1-62703-624-5

usually dispatched within 3 to 5 business days

J.A. Labinger, California Institute of Technology, Pasadena, USA

Up from Generality

How Inorganic Chemistry Finally Became a Respectable Field

In this brief, renowned inorganic chemist Jay Labinger tracks the development of his field from a forgotten specialism to the establishment of an independent, intellectually viable discipline. Inorganic chemistry, with a negation in its very name, was long regarded as that which was left behind when organic and physical chemistry emerged as specialist fields in the 19th century. Only by the middle of the 20th century had it begun to gain its current stature of equality to that of the other main branches of chemistry. The author discusses the evidence for this transition, both quantitative and anecdotal and includes consideration of the roles of local and personal factors, with[...]

Features

In this brief, renowned inorganic chemist Jay Labinger tracks the development of his field from a forgotten specialism to the establishment of an independent, intellectually viable discipline. Inorganic chemistry, with a negation in its very name, was long regarded as that which was left behind when organic and physical chemistry emerged as specialist fields in the 19th century. Only by the middle of the 20th [...]

Contents

From the Contents: False Labor: Inorganic Chemistry in the Late 19th -early 20th Centuries.- The (Re)birth of Inorganic Chemistry.- The Personal Factor: Donald Yost and Inorganic Chemistry at Caltech.- Agents of Respectability.

Fields of interest

Inorganic Chemistry; History; History of Science

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-642-40119-0

Softcover

2013. IX, 77 p. 30 illus. (SpringerBriefs in History of Chemistry)

\$54.99

ISBN 978-3-642-40119-0

usually dispatched within 3 to 5 business days

Computer Science

H. Yoshida, Harvard Medical School, Boston, USA; S. Warfield, Boston's Children Hospital, Boston, USA; M. Vannier, The University of Chicago, Chicago, USA (Eds.)

Abdominal Imaging. Computational and Clinical Applications

5th International Workshop, Held in Conjunction with MICCAI 2013, Nagoya, Japan, September 22, 2013, Proceedings

This book constitutes the refereed proceedings of the 5th International Workshop CCAA 2013, held in conjunction with MICCAI 2013, in Nagoya, Japan, in September 2013. The book includes 32 papers which were carefully reviewed and selected from 38 submissions. The topics covered are abdominal atlases, shape analysis and morphology in abdominal structures and organs, detection of anatomical and functional landmarks, dynamic, functional, physiologic, and anatomical abdominal imaging, registration methods for abdominal intra- and inter-patient variability, augmented reality techniques for intervention, clinical applications in radio-frequency ablation, open surgery, and minimally invasive[...]

Features

This book constitutes the refereed proceedings of the 5th International Workshop CCAA 2013, held in conjunction with MICCAI 2013, in Nagoya, Japan, in September 2013. The book includes 32 papers which were carefully reviewed and selected from 38 submissions. The topics covered are abdominal atlases, shape analysis and morphology in abdominal structures and organs, detection of anatomical and functional [...]

Contents

A Model Development Pipeline for Crohn's Disease Severity Assessment from Magnetic Resonance Images.- Spatially Constrained Incoherent Motion (SCIM) Model Improves Quantitative Diffusion-Weighted MRI Analysis of Crohn's Disease Patients.- Self Similarity Image Registration based on Reorientation of the Hessian.- Registration of Prone and Supine CT Colonography Datasets with Differing Endoluminal Distension.- Spatial Correspondence between Prone and Supine CT Colonography Images: Creating a Reference Standard.- Registration of Temporally Separated CT Colonography Cases.- A[...]

Fields of interest

Image Processing and Computer Vision; Computer Imaging, Vision, Pattern Recognition and Graphics; Computation by Abstract Devices; Pattern Recognition; Artificial Intelligence (incl. Robotics); Computer Science (general)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41082-6

Softcover

2013. XIV, 300 p. 147 illus. (Image Processing, Computer Vision, Pattern Recognition, and Graphics, Vol. 8198)

\$83.00

ISBN 978-3-642-41082-6

usually dispatched within 3 to 5 business days

I. Rojas, University of Granada, Granada, Spain; G. Joya, University of Malaga, Malaga, Spain; J. Cabestany, Universitat Politècnica de Catalunya, Barcelona, Spain (Eds.)

Advances in Computational Intelligence

12th International Work-Conference on Artificial Neural Networks, IWANN 2013, Puerto de la Cruz, Tenerife, Spain, June 12-14, 2013, Proceedings, Part II

This two-volume set LNCS 7902 and 7903 constitutes the refereed proceedings of the 12th International Work-Conference on Artificial Neural Networks, IWANN 2013, held in Puerto de la Cruz, Tenerife, Spain, in June 2013. The 116 revised papers were carefully reviewed and selected from numerous submissions for presentation in two volumes. The papers explore sections on mathematical and theoretical methods in computational intelligence, neurocomputational formulations, learning and adaptation emulation of cognitive functions, bio-inspired systems and neuro-engineering, advanced topics in computational intelligence and applications.

Features

This two-volume set LNCS 7902 and 7903 constitutes the refereed proceedings of the 12th International Work-Conference on Artificial Neural Networks, IWANN 2013, held in Puerto de la Cruz, Tenerife, Spain, in June 2013. The 116 revised papers were carefully reviewed and selected from numerous submissions for presentation in two volumes. The papers explore sections on mathematical and theoretical methods in [...]

Contents

It's as Easy as ABC: Introducing Anthropology-Based Computing.- Extreme Learning Machine: A Robust Modeling Technique? Yes!.- A Novel Framework to Design Fuzzy Rule-Based Ensembles Using Diversity Induction and Evolutionary Algorithms-Based Classifier Selection and Fusion.- Using Nonlinear Dimensionality Reduction to Visualize Classifiers.- Which Dissimilarity Is to Be Used When Extracting Typologies in Sequence Analysis? A Comparative Study.- Implementation of the C-Mantec Neural Network Constructive Algorithm in an Arduino Uno Microcontroller.- A Constructive Neural Network to Predict[...]

Fields of interest

Computational Biology / Bioinformatics; Pattern Recognition; Artificial Intelligence (incl. Robotics); Data Mining and Knowledge Discovery; Models and Principles; Bioinformatics

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-38681-7

Softcover

2013. XXVIII, 517 p. 180 illus. (Theoretical Computer Science and General Issues, Vol. 7903)

\$107.00

ISBN 978-3-642-38681-7

usually dispatched within 3 to 5 business days

G. Peterson, S. Sheno, University of Tulsa, Tulsa, USA (Eds.)

Advances in Digital Forensics IX

9th IFIP WG 11.9 International Conference on Digital Forensics, Orlando, FL, USA, January 28-30, 2013, Revised Selected Papers

Digital forensics deals with the acquisition, preservation, examination, analysis and presentation of electronic evidence. Networked computing, wireless communications and portable electronic devices have expanded the role of digital forensics beyond traditional computer crime investigations. Practically every crime now involves some aspect of digital evidence; digital forensics provides the techniques and tools to articulate this evidence. Digital forensics also has myriad intelligence applications. Furthermore, it has a vital role in information assurance - investigations of security breaches yield valuable information that can be used to design more secure systems. Advances in [...]

Features

Digital forensics deals with the acquisition, preservation, examination, analysis and presentation of electronic evidence. Networked computing, wireless communications and portable electronic devices have expanded the role of digital forensics beyond traditional computer crime investigations. Practically every crime now involves some aspect of digital evidence; digital forensics provides the techniques and [...]

Contents

History, Historiography and the Hermeneutics of the Hard.- Protecting Third Party Privacy in Digital Forensic Investigations.- On the Scientific Maturity of Digital Forensics Research.- Cognitive Approaches for Digital Forensic Readiness Planning.- A Harmonized Process Model for Digital Forensic Investigation Readiness.- Evaluation of the Semi-Automated Crime-Specific Digital Triage Process Model.- Reducing the Time Required for Hashing Operations.- Hash-Based File Content Identification Using Distributed Systems.- Creating Super Timelines in Windows Investigations.- Using a Goal-Driven[...]

Fields of interest

Systems and Data Security; Computers and Society; Computer Appl. in Administrative Data Processing; Data Encryption; Computer Communication Networks

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41147-2

Hardcover

2013. XX, 398 p. 92 illus. (IFIP Advances in Information and Communication Technology, Vol. 410)

\$149.00

ISBN 978-3-642-41147-2

usually dispatched within 3 to 5 business days

I. Oshri, Loughborough School of Business, Loughborough, United Kingdom; J. Kotlarsky, Aston Business School, Birmingham, United Kingdom; L.P. Willcocks, London School of Economics, London, United Kingdom (Eds.)

Advances in Global Sourcing. Models, Governance, and Relationships

7th Global Sourcing Workshop 2013, Val d'Isère, France, March 11-14, 2013, Revised Selected Papers

This book contains 13 papers from the 7th Workshop on Global Sourcing, held in Val d'Isère, France, during March 11-14, 2013, which were carefully reviewed and selected from 40 submissions. They are based on a vast empirical base brought together by leading researchers in information systems, strategic management, and operations. This volume is intended for students, academics, and practitioners interested in research results and experiences on outsourcing and offshoring of information technology and business processes. The topics discussed represent both client and supplier perspectives on sourcing of global services, combine theoretical and practical insights regarding challenges[...]

Features

This book contains 13 papers from the 7th Workshop on Global Sourcing, held in Val d'Isère, France, during March 11-14, 2013, which were carefully reviewed and selected from 40 submissions. They are based on a vast empirical base brought together by leading researchers in information systems, strategic management, and operations. This volume is intended for students, academics, and practitioners [...]

Contents

IT Global Delivery Model Efficiency: An Exploratory Case Study to Identify Input and Output Factors.- Relative and Joint Dependence in IS Outsourcing Relationships - A Model of Effects on Relational Facets and Exchange Performance.- The Role of Organizational Standards in IT Outsourcing Relations.- Vendor Capabilities in ITO Research: A Systematization and Critical Review.- The Middle Management of Offshoring: Understanding Offshoring Strategy Implementation at a Meso Level.- Offshore BPO Decisions and Institutional Influence on Senior Managers.- Cloud Computing as Innovation: Studying[...]

Fields of interest

Management of Computing and Information Systems; Software Engineering; Organization / Planning; Procurement

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40950-9

Softcover

2013. X, 223 p. 23 illus. (Lecture Notes in Business Information Processing, Vol. 163)

\$72.00

ISBN 978-3-642-40950-9

usually dispatched within 3 to 5 business days

A. Tucker, Brunel University, Uxbridge, United Kingdom; F. Höppner, Ostfalia University of Applied Sciences, Wolfenbüttel, Germany; A. Siebes, Universiteit Utrecht, Utrecht, Netherlands; S. Swift, Brunel University, Uxbridge, United Kingdom (Eds.)

Advances in Intelligent Data Analysis XII

12th International Symposium, IDA 2013, London, UK, October 17-19, 2013, Proceedings

This book constitutes the refereed conference proceedings of the 12th International Conference on Intelligent Data Analysis, which was held in October 2013 in London, UK. The 36 revised full papers together with 3 invited papers were carefully reviewed and selected from 84 submissions handling all kinds of modeling and analysis methods, irrespective of discipline. The papers cover all aspects of intelligent data analysis, including papers on intelligent support for modeling and analyzing data from complex, dynamical systems.

Features

This book constitutes the refereed conference proceedings of the 12th International Conference on Intelligent Data Analysis, which was held in October 2013 in London, UK. The 36 revised full papers together with 3 invited papers were carefully reviewed and selected from 84 submissions handling all kinds of modeling and analysis methods, irrespective of discipline. The papers cover all aspects of intelligent [...]

Contents

Data, Not Dogma: Big Data, Open Data, and the Opportunities Ahead.- Computational Techniques for Crop Disease Monitoring in the Developing World.- Subjective Interestingness in Exploratory Data Mining.- Time Point Estimation of a Single Sample from High Throughput Experiments Based on Time-Resolved Data and Robust Correlation Measures.- Detecting Events in Molecular Dynamics Simulations.- Graph Clustering by Maximizing Statistical Association Measures.- Evaluation of Association Rule Quality Measures through Feature Extraction.- Towards Comprehensive Concept Description Based on [...]

Fields of interest

Database Management; Information Systems Applications (incl.Internet); Artificial Intelligence (incl. Robotics); Information Storage and Retrieval; Algorithm Analysis and Problem Complexity; Data Mining and Knowledge Discovery

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41397-1

Softcover

2013. XIV, 464 p. 140 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8207)
\$95.00

ISBN 978-3-642-41397-1

usually dispatched within 3 to 5 business days

V. Prabhu, Penn State University, University Park, USA; M. Taisch, Politecnico di Milano, Milano, Italy; D. Kiritsis (Eds.)

Advances in Production Management Systems. Sustainable Production and Service Supply Chains

IFIP WG 5.7 International Conference, APMS 2013, State College, PA, USA, September 9-12, 2013, Proceedings, Part I

The two volumes IFIP AICT 414 and 415 constitute the refereed proceedings of the International IFIP WG 5.7 Conference on Advances in Production Management Systems, APMS 2013, held in University Park, PA, USA, in September 2013. The 133 revised full papers were carefully reviewed and selected for inclusion in the two volumes. They are organized in 4 parts: sustainable production, sustainable supply chains, sustainable services, and ICT and emerging technologies.

Features

The two volumes IFIP AICT 414 and 415 constitute the refereed proceedings of the International IFIP WG 5.7 Conference on Advances in Production Management Systems, APMS 2013, held in University Park, PA, USA, in September 2013. The 133 revised full papers were carefully reviewed and selected for inclusion in the two volumes. They are organized in 4 parts: sustainable production, sustainable supply chains, [...]

Contents

Sustainable production.- Sustainable supply chains.- Sustainable services.- ICT and emerging technologies.

Fields of interest

Computer-Aided Engineering (CAD, CAE) and Design; Information Systems Applications (incl.Internet); Business Information Systems; Computer Applications

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41265-3

Hardcover

2013. XXIV, 516 p. 187 illus. (IFIP Advances in Information and Communication Technology, Vol. 414)

\$169.00

ISBN 978-3-642-41265-3

usually dispatched within 3 to 5 business days

V. Prabhu, Penn State University, University Park, USA; M. Taisch, Politecnico di Milano, Milano, USA; D. Kiritsis (Eds.)

Advances in Production Management Systems. Sustainable Production and Service Supply Chains

IFIP WG 5.7 International Conference, APMS 2013, State College, PA, USA, September 9-12, 2013, Proceedings, Part II

The two volumes IFIP AICT 414 and 415 constitute the refereed proceedings of the International IFIP WG 5.7 Conference on Advances in Production Management Systems, APMS 2013, held in University Park, PA, USA, in September 2013. The 133 revised full papers were carefully reviewed and selected for inclusion in the two volumes. They are organized in 4 parts: sustainable production, sustainable supply chains, sustainable services, and ICT and emerging technologies.

Features

The two volumes IFIP AICT 414 and 415 constitute the refereed proceedings of the International IFIP WG 5.7 Conference on Advances in Production Management Systems, APMS 2013, held in University Park, PA, USA, in September 2013. The 133 revised full papers were carefully reviewed and selected for inclusion in the two volumes. They are organized in 4 parts: sustainable production, sustainable supply chains, [...]

Contents

Sustainable production.- Sustainable supply chains.- Sustainable services.- ICT and emerging technologies.

Fields of interest

Computer-Aided Engineering (CAD, CAE) and Design; Information Systems Applications (incl.Internet); Business Information Systems; Computer Applications

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41262-2

Hardcover

2013. XXIV, 604 p. 190 illus. (IFIP Advances in Information and Communication Technology, Vol. 415)

\$189.00

ISBN 978-3-642-41262-2

usually dispatched within 3 to 5 business days

J.-F. Wang, Tajen University, Yanpu Township, Taiwan; R. Lau, City University of Hong Kong, Hong Kong, China (P.R.) (Eds.)

Advances in Web-Based Learning -- ICWL 2013

12th International Conference, Kenting, Taiwan, October 6-9, 2013, Proceedings

This book constitutes the refereed proceedings of the 12th International Conference on Web-Based Learning, ICWL 2013, held in Kenting, Taiwan, in October 2013. The 34 revised full papers presented were carefully reviewed and selected from about 117 submissions. The papers are organized in topical sections on interactive learning environments, design, model and framework of e-learning systems, personalized and adaptive learning, Web 2.0 and social learning environments, intelligent tools for visual learning, semantic Web and ontologies for e-learning, and Web-based learning for languages learning.

Features

This book constitutes the refereed proceedings of the 12th International Conference on Web-Based Learning, ICWL 2013, held in Kenting, Taiwan, in October 2013. The 34 revised full papers presented were carefully reviewed and selected from about 117 submissions. The papers are organized in topical sections on interactive learning environments, design, model and framework of e-learning systems, personalized [...]

Contents

Interactive Learning Environments.- Design, Model and Framework of E-learning Systems.- Personalized and Adaptive Learning.- Web 2.0 and Social Learning Environments.- Intelligent Tools for Visual Learning.- Semantic Web and Ontologies for E-learning.- Web-Based Learning for Languages Learning.

Fields of interest

Computers and Education; Information Systems and Communication Service; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41174-8

Softcover

2013. XVI, 352 p. 133 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8167)

\$83.00

ISBN 978-3-642-41174-8

usually dispatched within 3 to 5 business days

E. David, C. Kiekintveld, V. Robu, O. Shehory, IBM Haifa Research Laboratory, Haifa, Israel; S. Stein, University of Southampton, Southampton, United Kingdom (Eds.)

Agent-Mediated Electronic Commerce. Designing Trading Strategies and Mechanisms for Electronic Markets

AMEC and TADA 2012, Valencia, Spain, June 4th, 2012, Revised Selected Papers

This volume contains 11 thoroughly refereed and revised papers detailing recent advances in research on designing trading agents and mechanisms for agent-mediated e-commerce. They were originally presented at the Joint Workshop on Trading Agent Design and Analysis (TADA 2012) and Agent-Mediated Electronic Commerce (AMEC 2012) co-located with AAMAS 2012 in Valencia, Spain, in June 2012. The increasing reliance on software agents has created a range of pressing new research challenges, including the design of appropriate agent decision algorithms, approaches for predicting the complex behaviors and interactions of multiple agents, including the computation of equilibria, and the [...]

Features

This volume contains 11 thoroughly refereed and revised papers detailing recent advances in research on designing trading agents and mechanisms for agent-mediated e-commerce. They were originally presented at the Joint Workshop on Trading Agent Design and Analysis (TADA 2012) and Agent-Mediated Electronic Commerce (AMEC 2012) co-located with AAMAS 2012 in Valencia, Spain, in June 2012. The increasing [...]

Contents

Social Networking and Information Diffusion in Automated Markets.- Policy Search through Adaptive Function Approximation for Bidding in TAC SCM.- Designing Robust Strategies for Continuous Trading in Contemporary Power Markets.- JACK: A Java Auction Configuration Kit.- A Decision Framework for Broker Selection in Smart Grids.- Prediction Market-Based Information Aggregation for Multi-sensor Information Processing.- Agent Adaptation across Non-ideal Markets and Societies.- Incentives in Multi-dimensional Auctions under Information Asymmetry for Costs and Qualities.- A Model-Free Approach [...]

Fields of interest

e-commerce / e-business; Business Information Systems; Artificial Intelligence (incl. Robotics); Computer Appl. in Administrative Data Processing; Information Systems Applications (incl. Internet)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40863-2

Softcover

2013. XII, 161 p. 44 illus. (Lecture Notes in Business Information Processing, Vol. 136)

\$72.00

ISBN 978-3-642-40863-2

usually dispatched within 3 to 5 business days

B. Vöcking, RWTH Aachen, Aachen, Germany (Ed.)

Algorithmic Game Theory

6th International Symposium, SAGT 2013, Aachen, Germany, October 21-23, 2013, Proceedings

This book constitutes the proceedings of the 6th International Symposium on Algorithmic Game Theory, SAGT 2013, held in Aachen, Germany, in October 2013. The 25 papers presented in this volume were carefully reviewed and selected from 65 submissions. They cover various important aspects of algorithmic game theory, such as solution concepts in game theory, efficiency of equilibria and the price of anarchy, computational aspects of equilibria and game theoretical measures, repeated games and convergence of dynamics, evolution and learning in games, coordination and collective action, network games and graph-theoretic aspects of social networks, voting and social choice, as well as [...]

Features

This book constitutes the proceedings of the 6th International Symposium on Algorithmic Game Theory, SAGT 2013, held in Aachen, Germany, in October 2013. The 25 papers presented in this volume were carefully reviewed and selected from 65 submissions. They cover various important aspects of algorithmic game theory, such as solution concepts in game theory, efficiency of equilibria and the price of anarchy, [...]

Contents

The Complexity of Fully Proportional Representation for Single-Crossing Electorates.- New Results on Equilibria in Strategic Candidacy.- Plurality Voting with Truth-Biased Agents.- Reliability Weighted Voting Games.- The Power of Mediation in an Extended El Farol Game.- Friend of My Friend: Network Formation with Two-Hop Benefit.- Load Rebalancing Games in Dynamic Systems with Migration Costs.- Stochastic Congestion Games with Risk-Averse Players.- Congestion Games with Player-Specific Costs Revisited.- Using Reputation Instead of Tolls in Repeated Selfish Routing with Incomplete [...]

Fields of interest

Simulation and Modeling; e-commerce / e-business; Models and Principles; Computers and Society; Numeric Computing; Probability and Statistics in Computer Science

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41391-9

Softcover

2013. XII, 271 p. 29 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8146)

\$72.00

ISBN 978-3-642-41391-9

usually dispatched within 3 to 5 business days

S. Jain, National University of Singapore, Singapore, Singapore;
R. Munos, F. Stephan, Th. Zeugmann, Hokkaido University, Sapporo, Japan (Eds.)

Algorithmic Learning Theory

24th International Conference, ALT 2013, Singapore, October 6-9, 2013, Proceedings

This book constitutes the proceedings of the 24th International Conference on Algorithmic Learning Theory, ALT 2013, held in Singapore in October 2013, and co-located with the 16th International Conference on Discovery Science, DS 2013. The 23 papers presented in this volume were carefully reviewed and selected from 39 submissions. In addition the book contains 3 full papers of invited talks. The papers are organized in topical sections named: online learning, inductive inference and grammatical inference, teaching and learning from queries, bandit theory, statistical learning theory, Bayesian/stochastic learning, and unsupervised/semi-supervised learning.

Features

This book constitutes the proceedings of the 24th International Conference on Algorithmic Learning Theory, ALT 2013, held in Singapore in October 2013, and co-located with the 16th International Conference on Discovery Science, DS 2013. The 23 papers presented in this volume were carefully reviewed and selected from 39 submissions. In addition the book contains 3 full papers of invited talks. The papers are [...]

Contents

Editors' Introduction.- Learning and Optimizing with Preferences.- Efficient Algorithms for Combinatorial Online Prediction.- Exact Learning from Membership Queries: Some Techniques, Results and New Directions.- Online Learning Universal Algorithm for Trading in Stock Market Based on the Method of Calibration.- Combinatorial Online Prediction via Metarounding.- On Competitive Recommendations.- Online PCA with Optimal Regrets.- Inductive Inference and Grammatical Inference Partial Learning of Recursively Enumerable Languages.- Topological Separations in Inductive Inference.- PAC Learning[...]

Fields of interest

Artificial Intelligence (incl. Robotics); Mathematical Logic and Formal Languages; Algorithm Analysis and Problem Complexity; Computation by Abstract Devices; Logics and Meanings of Programs; Pattern Recognition

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40934-9

Softcover

2013. XVIII, 397 p. 30 illus. (Lecture Notes in Artificial Intelligence, Vol. 8139)

\$95.00

ISBN 978-3-642-40934-9

usually dispatched within 3 to 5 business days

H. Papadopoulos, Frederick University, Nicosia, Cyprus; A.S. Andreou, L.S. Iliadis, Democritus University of Thrace, Orestiada Thrace, Greece; I. Maglogiannis, University of Piraeus, Piraeus, Greece (Eds.)

Artificial Intelligence Applications and Innovations

9th IFIP WG 12.5 International Conference, AIAI 2013, Paphos, Cyprus, September 30 -- October 2, 2013, Proceedings

This book constitutes the refereed proceedings of the 9th IFIP WG 12.5 International Conference on Artificial Intelligence Applications and Innovations, AIAI 2013, held in Paphos, Cyprus, in September/October 2013. The 26 revised full papers presented together with a keynote speech at the main event and 44 papers of 8 colocated workshops were carefully reviewed and selected for inclusion in the volume. The papers of the main event are organized in topical sections on data mining, medical informatics and biomedical engineering, problem solving and scheduling, modeling and decision support systems, robotics, and intelligent signal and image processing.

Features

This book constitutes the refereed proceedings of the 9th IFIP WG 12.5 International Conference on Artificial Intelligence Applications and Innovations, AIAI 2013, held in Paphos, Cyprus, in September/October 2013. The 26 revised full papers presented together with a keynote speech at the main event and 44 papers of 8 colocated workshops were carefully reviewed and selected for inclusion in the volume. The [...]

Contents

Data mining, medical informatics and biomedical engineering.- Problem solving and scheduling.- Modeling and decision support systems.- Robotics.- Intelligent signal and image processing.

Fields of interest

Artificial Intelligence (incl. Robotics); Pattern Recognition; Data Mining and Knowledge Discovery; Image Processing and Computer Vision; Computers and Education; Information Systems Applications (incl. Internet)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41141-0

Hardcover

2013. XXVIII, 709 p. 210 illus. (IFIP Advances in Information and Communication Technology, Vol. 412)

\$209.00

ISBN 978-3-642-41141-0

usually dispatched within 3 to 5 business days

T. Ida, University of Tsukuba, Tsukuba, Japan; J. Fleuriot (Eds.)

Automated Deduction in Geometry

9th International Workshop, ADG 2012, Edinburgh, UK, September 17-19, 2012. Revised Selected Papers

This book constitutes the thoroughly refereed post-workshop proceedings of the 9th International Workshop on Automated Deduction in Geometry, ADG 2012, held in Edinburgh, UK, in September 2012. The 10 revised full papers presented together with 2 invited papers were carefully selected during two rounds of reviewing and improvement from the lectures given at the workshop. The conference represents a forum to exchange ideas and views, to present research results and progress, and to demonstrate software tools at the intersection between geometry and automated deduction; the scope of the ADG 2012 moreover has been expanded to cover topics in dynamic geometry.

Features

This book constitutes the thoroughly refereed post-workshop proceedings of the 9th International Workshop on Automated Deduction in Geometry, ADG 2012, held in Edinburgh, UK, in September 2012. The 10 revised full papers presented together with 2 invited papers were carefully selected during two rounds of reviewing and improvement from the lectures given at the workshop. The conference represents a forum to [...]

Contents

Proof and Computation in Geometry.- Automation of Geometry: Theorem Proving, Diagram.- Generation, and Knowledge Management.- Improving Angular Speed Uniformity by C1 Piecewise Reparameterization.- Extending the Descartes Circle Theorem for Steiner n-Cycles.- Equation Systems with Free-Coordinates Determinants.- Formal Proof in Coq and Derivation of an Imperative Program to Compute Convex Hulls.- Realizations of Volume Frameworks.- Rigidity of Origami Universal Molecules.- Algebraic Analysis of Huzita's Origami Operations and Their Extensions.- On the Formal Analysis of Geometrical[...]

Fields of interest

Artificial Intelligence (incl. Robotics); Computer Graphics; Mathematical Logic and Formal Languages; Symbolic and Algebraic Manipulation; Discrete Mathematics in Computer Science; Software Engineering

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40671-3

Softcover

2013. X, 193 p. 55 illus. (Lecture Notes in Artificial Intelligence, Vol. 7993)

\$72.00

ISBN 978-3-642-40671-3

usually dispatched within 3 to 5 business days

D. Van Hung, Vietnam National University, Hanoi, Vietnam; M. Ogawa, Japan Advanced Institute, Ishikawa, Japan (Eds.)

Automated Technology for Verification and Analysis

11th International Symposium, ATVA 2013, Hanoi, Vietnam, October 15-18, 2013, Proceedings

This book constitutes the refereed proceedings of the 11th International Symposium on Automated Technology for Verification and Analysis, ATVA 2013, held at Hanoi, Vietnam, in October 2013. The 27 regular papers, 3 short papers and 12 tool papers presented together with 3 invited talks were carefully selected from 73 submissions. The papers are organized in topical sections on analysis and verification of hardware circuits, systems-on-chip and embedded systems, analysis of real-time, hybrid, priced/weighted and probabilistic systems, deductive, algorithmic, compositional, and abstraction/refinement techniques for analysis and verification, analytical techniques for safety, [...]

Features

This book constitutes the refereed proceedings of the 11th International Symposium on Automated Technology for Verification and Analysis, ATVA 2013, held at Hanoi, Vietnam, in October 2013. The 27 regular papers, 3 short papers and 12 tool papers presented together with 3 invited talks were carefully selected from 73 submissions. The papers are organized in topical sections on analysis and [...]

Contents

Invited Papers.- Acceleration for Petri Nets.- Automated Verification and Strategy Synthesis for Probabilistic Systems.- SMT-Based Software Model Checking: Explicit Scheduler, Symbolic Threads.- Regular Papers.- Effective Translation of LTL to Deterministic Rabin Automata: Beyond the (F,G)-Fragment.- Improved Upper and Lower Bounds for B²-uchi Disambiguation.- Time-Bounded Reachability for Monotonic Hybrid Automata: Complexity and Fixed Points.- An Automatic Technique for Checking the Simulation of Timed Systems.- Synthesis of Bounded Integer Parameters for Parametric Timed Reachability[...]

Fields of interest

Software Engineering; Programming Techniques; Computer Communication Networks; Logics and Meanings of Programs; Programming Languages, Compilers, Interpreters; Software Engineering / Programming and Operating Systems

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-02443-1

Softcover

2013. XIV, 528 p. 115 illus. (Programming and Software Engineering, Vol. 8172)

\$107.00

ISBN 978-3-319-02443-1

usually dispatched within 3 to 5 business days

S. Blackman

Beginning 3D Game Development with Unity 4

All-in-one, multi-platform game development

Beginning 3D Game Development with Unity 4 is perfect for those who would like to come to grips with programming Unity. You may be an artist who has learned 3D tools such as 3ds Max, Maya, or Cinema 4D, or you may come from 2D tools such as Photoshop and Illustrator. On the other hand, you may just want to familiarize yourself with programming games and the latest ideas in game production. This book introduces key game production concepts in an artist-friendly way, and rapidly teaches the basic scripting skills you'll need with Unity. It goes on to show how you, as an independent game artist, can create interactive games, ideal in scope for today's casual and mobile markets, while[...]

Features

Beginning 3D Game Development with Unity 4 is perfect for those who would like to come to grips with programming Unity. You may be an artist who has learned 3D tools such as 3ds Max, Maya, or Cinema 4D, or you may come from 2D tools such as Photoshop and Illustrator. On the other hand, you may just want to familiarize yourself with programming games and the latest ideas in game production. [...]

Fields of interest

Computer Science (general)

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-4899-6

Softcover

2013. 808 p.

\$49.99

ISBN 978-1-4302-4899-6

usually dispatched within 3 to 5 business days

B. Sutherland

Beginning Android C++ Game Development

Beginning Android C++ Game Development introduces general and Android game developers like you to Android's powerful Native Development Kit (NDK). The Android NDK platform allows you to build the most sophisticated, complex and best performing game apps that leverage C++. In short, you learn to build professional looking and performing game apps like the book's case study, Droid Runner. In this book, you'll learn all the major aspects of game design and programming using the Android NDK and be ready to submit your first professional video game app to Google Play and Amazon Appstore for today's Android smartphones and tablet users to download and play. The techniques contained in[...]

Features

Beginning Android C++ Game Development introduces general and Android game developers like you to Android's powerful Native Development Kit (NDK). The Android NDK platform allows you to build the most sophisticated, complex and best performing game apps that leverage C++. In short, you learn to build professional looking and performing game apps like the book's case study, Droid Runner. [...]

Fields of interest

Computer Science (general)

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-5830-8

Softcover

2014. 316 p.

\$44.99

ISBN 978-1-4302-5830-8

usually dispatched within 3 to 5 business days

A. Gamble, C. Carneiro Jr., R. Al Barazi

Beginning Rails 4

Beginning Rails 4 is a book that will guide you from never having programmed with Ruby, to having a Rails application built and deployed to the web. You'll learn how to combine all the components of Rails to develop your own web applications. You will use test driven development to make sure your application works exactly like you expect. You will learn how to use Git for source control and best practice techniques to create applications like a pro. Essential, and often-missed, information on testing and learning to program with Ruby are also covered. This book is well suited for someone with little to no Ruby or Rails experience, or possibly even someone with no experience developing[...]

Features

Beginning Rails 4 is a book that will guide you from never having programmed with Ruby, to having a Rails application built and deployed to the web. You'll learn how to combine all the components of Rails to develop your own web applications. You will use test driven development to make sure your application works exactly like you expect. You will learn how to use Git for source control and [...]

Fields of interest

Computer Science (general)

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-6034-9

Softcover

2013. 328 p.

\$49.99

ISBN 978-1-4302-6034-9

usually dispatched within 3 to 5 business days

V. Kumar

Beginning Windows 8 Data Development

Using C# and JavaScript

This book introduces novice developers to a range of data access strategies for storing and retrieving data both locally and remotely. It provides you with a range of fully working data access solutions and the insight you need to know when, and how, to apply each of the techniques to best advantage. Focussing specifically on how the Windows 8 app developer can work with the Windows Runtime (often called Windows RT) framework this book provides careful analysis of the many options you have open to you, along with a comparison of their strengths and weaknesses under different conditions. With the days of a single database being the right choice for almost all development projects[...]

Features

This book introduces novice developers to a range of data access strategies for storing and retrieving data both locally and remotely. It provides you with a range of fully working data access solutions and the insight you need to know when, and how, to apply each of the techniques to best advantage. Focussing specifically on how the Windows 8 app developer can work with the Windows Runtime [...]

Fields of interest

Computer Science (general)

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-4992-4

Softcover

2013. 252 p.

\$39.99

ISBN 978-1-4302-4992-4

usually dispatched within 3 to 5 business days

S. Isaacs, K. Burns

Beginning Windows Store Application Development # HTML and JavaScript Edition

Beginning Windows Store Application Development # HTML and JavaScript Edition introduces you to the Windows 8 modern app design paradigm and the new Windows 8 programming model developed around this paradigm. You'll learn to build rich, immersive applications designed to run on the many devices powered by Windows 8. The authors draw on their extensive practical experience to provide not only a comprehensive introduction to the model and its features, but guidance on best practices and a real-world sample application that you develop over the course of the book. Beginning Windows Store Application Development # HTML and JavaScript Edition also emphasizes how devices will be used and[...]

Features

Beginning Windows Store Application Development # HTML and JavaScript Edition introduces you to the Windows 8 modern app design paradigm and the new Windows 8 programming model developed around this paradigm. You'll learn to build rich, immersive applications designed to run on the many devices powered by Windows 8. The authors draw on their extensive practical experience to provide [...]

Fields of interest

Computer Science (general)

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-5779-0

Softcover

2013. 552 p.

\$39.99

ISBN 978-1-4302-5779-0

usually dispatched within 3 to 5 business days

C.-k. Chan, The Hong Kong Polytechnic University, Hong Kong, China (P.R.); H.-f. Leung, The Chinese University of Hong Kong, Hong Kong, China (P.R.)

Belief-based Stability in Coalition Formation with Uncertainty

An Intelligent Agents' Perspective

Belief-based Stability in Coalition Formation with Uncertainty An Intelligent Agents' Perspective discusses coalition stability. It extends the classic stability concept of the non-transferable utility core by proposing new belief-based stability criteria under uncertainty, and illustrates how the new concept can be used to analyze the stability of a new type of belief-based coalition formation game. The book is intended for graduate students, engineers, and researchers in the field of artificial intelligence and computer science. Chi-kong Chan is a laboratory manager and a visiting lecturer at the Hong Kong Polytechnic University, China; Ho-fung Leung is a Professor and the Chairman[...]

Features

Belief-based Stability in Coalition Formation with Uncertainty An Intelligent Agents' Perspective discusses coalition stability. It extends the classic stability concept of the non-transferable utility core by proposing new belief-based stability criteria under uncertainty, and illustrates how the new concept can be used to analyze the stability of a new type of belief-based coalition [...]

Contents

Game Theoretic Analysis of Coalition Formation.- Strong Core and Weak Core.- b-Core.- An Example Application of the b-Core.- The Complete Picture—the sb-Core and the wb-Core.

Fields of interest

Artificial Intelligence (incl. Robotics); Game Theory, Economics, Social and Behav. Sciences; Computers and Society; Symbolic and Algebraic Manipulation

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-38214-7

Distribution rights in China: Higher Education Press

Hardcover

Jointly published with Higher Education Press.

2013. XIX, 183 p.

\$109.00

ISBN 978-3-642-38214-7

Due: October 28, 2013

M. Beckner

BizTalk 2013 EDI for Supply Chain Management

Working with Invoices, Purchase Orders and Related Document Types

Building a successful supply chain processing EDI implementation in BizTalk Server can be complex. Decisions must be made around how to extract and publish data, how to map to the various EDI standards, and how to appropriately batch and deliver data. If architected properly, your BizTalk solution can be highly efficient, simple, and something that can be managed and extended for years to come. The topics in this book include building complete inbound and outbound solutions for 810, 845, and 850 EDI document types, which will lay the groundwork for any document type you may be implementing. In addition, topics on how to set up FTP, SFTP, and AS2 protocols for document exchange, [...]

Features

Building a successful supply chain processing EDI implementation in BizTalk Server can be complex. Decisions must be made around how to extract and publish data, how to map to the various EDI standards, and how to appropriately batch and deliver data. If architected properly, your BizTalk solution can be highly efficient, simple, and something that can be managed and extended for years to come. [...]

Fields of interest

Information Systems and Communication Service

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-6343-2

Softcover

2013. 96 p.

\$89.99

ISBN 978-1-4302-6343-2

usually dispatched within 3 to 5 business days

J. Vince, Bournemouth University, Poole, United Kingdom

Calculus for Computer Graphics

Students studying computer animation and computer games have to be familiar with geometry, matrices, vectors, rotation transforms, quaternions, curves and surfaces, and as computer graphics software becomes increasingly sophisticated, calculus is also being used to resolve its associated problems. The author draws upon his experience in teaching mathematics to undergraduates to make calculus appear no more challenging than any other branch of mathematics. He introduces the subject by examining how functions depend upon their independent variables, and then derives the appropriate mathematical underpinning and definitions. This gives rise to a function's derivative and its [...]

Features

Students studying computer animation and computer games have to be familiar with geometry, matrices, vectors, rotation transforms, quaternions, curves and surfaces, and as computer graphics software becomes increasingly sophisticated, calculus is also being used to resolve its associated problems. The author draws upon his experience in teaching mathematics to undergraduates to make calculus appear no [...]

Contents

Preface.- Introduction.- Functions.- Limits and Derivatives.- Derivatives and Antiderivatives.- Higher Derivatives.- Partial Derivatives.- Integral Calculus.- Area Under a Graph.- Arc Length.- Surface Area.- Volume.- Vector-Valued Functions.- Conclusion.- Appendices.- Index.

Fields of interest

Computer Graphics; Mathematical Applications in Computer Science

Target groups

Upper undergraduate

Type of publication

Undergraduate textbook

More on www.springer.com/978-1-4471-5465-5

Softcover

2013. XIII, 227 p. 144 illus.

\$49.99

ISBN 978-1-4471-5465-5

usually dispatched within 3 to 5 business days

P. Antunes, Victoria University of Wellington, Wellington, New Zealand; M.A. Gerosa, University of São Paulo, São Paulo, Brazil; A. Sylvester, Victoria University of Wellington, Wellington, New Zealand; J. Vassileva, University of Saskatchewan, Saskatoon, Canada; G.-J. de Vreede, University of Nebraska at Omaha, Omaha, USA (Eds.)

Collaboration and Technology

19th International Conference, CRIWG 2013, Wellington, New Zealand, October 30 - November 1, 2013, Proceedings

This book constitutes the proceedings of the 19th Collaboration Researchers' International Working Group Conference on Collaboration and Technology, held in Wellington, New Zealand, in October/November 2013. The 18 revised papers presented together with 4 progress papers were carefully reviewed and selected from 34 submissions. They are organized into six thematic sessions as follows social media, social networks, crowdsourcing, learning, collaboration design and software development.

Features

This book constitutes the proceedings of the 19th Collaboration Researchers' International Working Group Conference on Collaboration and Technology, held in Wellington, New Zealand, in October/November 2013. The 18 revised papers presented together with 4 progress papers were carefully reviewed and selected from 34 submissions. They are organized into six thematic sessions as follows social media, social [...]

Contents

Social Media.- Collaboration Using Social Media: The Case of Podio in a Voluntary Organization.- Keep Querying and Tag on: Collaborative Folksonomy Using Model-Based Recommendation.- Understanding Real-World Events via Multimedia Summaries Based on Social Indicators.- Social Networks.- How Do Researchers on Collaboration Technology Collaborate with Each Other? A Social Network Analysis.- Inferring Hidden Trust Relationships in Social Networks for Encouraging Collaboration and Cooperation among Individuals.- Providing Awareness, Understanding and Control of Personalized Stream Filtering[...]

Fields of interest

Information Systems Applications (incl.Internet); Computers and Education; User Interfaces and Human Computer Interaction; Computers and Society; Information Storage and Retrieval; Data Mining and Knowledge Discovery

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41346-9

Softcover

2013. XIV, 323 p. 96 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8224) **\$83.00**

ISBN 978-3-642-41346-9

usually dispatched within 3 to 5 business days

September 11, 2013

D. Pacino, S. Voß, University of Hamburg, Hamburg, Germany; R.M. Jensen (Eds.)

Computational Logistics

4th International Conference, ICCL 2013, Copenhagen, Denmark, September 25-27, 2013, Proceedings

This book constitutes the refereed proceedings of the 4th International Conference on Computational Logistics, ICCL 2013, held in Copenhagen, Denmark, in September 2013. The 19 papers presented in this volume were carefully reviewed and selected for inclusion in the book. They are organized in topical sections named: maritime shipping, road transport, vehicle routing problems, aviation applications, and logistics and supply chain management.

Features

This book constitutes the refereed proceedings of the 4th International Conference on Computational Logistics, ICCL 2013, held in Copenhagen, Denmark, in September 2013. The 19 papers presented in this volume were carefully reviewed and selected for inclusion in the book. They are organized in topical sections named: maritime shipping, road transport, vehicle routing problems, aviation applications, and [...]

Contents

Hierarchical Control of Equipment in Automated Container Terminals.- A Node Flow Model for the Inflexible Visitation Liner Shipping Fleet Repositioning Problem with Cargo Flows.- An LNS Approach for Container Stowage Multi-port Master Planning.- How Will the Marine Emissions Trading Scheme Influence the Profit and CO2 Emissions of a Containership.- Dynamic Routing on OpenStreetMap Using Ant Colonies.- On the Complexity of Computing Optimal Private Park-and-Ride Plans.- Predicting Road Accidents Based on Current and Historical Spatio-temporal Traffic Flow Data.- An Integrated Simulation[...]

Fields of interest

Algorithm Analysis and Problem Complexity; Information Systems Applications (incl.Internet); Software Engineering; Artificial Intelligence (incl. Robotics); Simulation and Modeling; Computer Appl. in Administrative Data Processing

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41018-5

Softcover

2013. X, 269 p. 72 illus. (Theoretical Computer Science and General Issues, Vol. 8197)

\$72.00

ISBN 978-3-642-41018-5

usually dispatched within 3 to 5 business days

V.P. Gerdt, W. Koepf, Universität Kassel, Kassel, Germany; E.W. Mayr, TU München, Garching, Germany; E.V. Vorozhtsov, Russian Academy of Sciences, Novosibirsk, Russian Federation (Eds.)

Computer Algebra in Scientific Computing

15th International Workshop, CASC 2013, Berlin, Germany, September 9-13, 2013, Proceedings

This book constitutes the proceedings of the 14th International Workshop on Computer Algebra in Scientific Computing, CASC 2013, held in Berlin, Germany, in September 2013. The 33 full papers presented were carefully reviewed and selected for inclusion in this book. The papers address issues such as polynomial algebra; the solution of tropical linear systems and tropical polynomial systems; the theory of matrices; the use of computer algebra for the investigation of various mathematical and applied topics related to ordinary differential equations (ODEs); applications of symbolic computations for solving partial differential equations (PDEs) in mathematical physics; problems arising[...]

Features

This book constitutes the proceedings of the 14th International Workshop on Computer Algebra in Scientific Computing, CASC 2013, held in Berlin, Germany, in September 2013. The 33 full papers presented were carefully reviewed and selected for inclusion in this book. The papers address issues such as polynomial algebra; the solution of tropical linear systems and tropical polynomial systems; the [...]

Contents

Polynomial algebra.- the solution of tropical linear systems and tropical polynomial systems.- the theory of matrices.- the use of computer algebra for the investigation of various mathematical and applied topics related to ordinary differential equations.- applications of symbolic computations for solving partial differential equations in mathematical physics.- problems arising at the application of computer algebra methods for finding infinitesimal symmetries.- applications of symbolic and symbolic-numeric algorithms in mechanics and physics.- automatic differentiation.- the[...]

Fields of interest

Algorithm Analysis and Problem Complexity; Discrete Mathematics in Computer Science; Symbolic and Algebraic Manipulation; Computer Graphics; Numeric Computing; Arithmetic and Logic Structures

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-02296-3

Softcover

2013. XVI, 443 p. 58 illus. (Theoretical Computer Science and General Issues, Vol. 8136)

\$95.00

ISBN 978-3-319-02296-3

usually dispatched within 3 to 5 business days

K. Saeed, R. Chaki, A. Cortesi, Università Ca' Foscari, Venice, Italy;
S. Wierzbński, Polish Academy of Sciences, Warsaw, Poland (Eds.)

Computer Information Systems and Industrial Management

12th IFIP TC 8 International Conference, CISIM 2013, Krakow, Poland, September 25-27, 2013, Proceedings

This book constitutes the proceedings of the 12th IFIP TC 8 International Conference, CISIM 2013, held in Cracow, Poland, in September 2013. The 44 papers presented in this volume were carefully reviewed and selected from over 60 submissions. They are organized in topical sections on biometric and biomedical applications; pattern recognition and image processing; various aspects of computer security, networking, algorithms, and industrial applications. The book also contains full papers of a keynote speech and the invited talk.

Features

This book constitutes the proceedings of the 12th IFIP TC 8 International Conference, CISIM 2013, held in Cracow, Poland, in September 2013. The 44 papers presented in this volume were carefully reviewed and selected from over 60 submissions. They are organized in topical sections on biometric and biomedical applications; pattern recognition and image processing; various aspects of computer security, [...]

Contents

What is the Value of Information – Search Engine's Point of View.- Application of Combined Classifiers to Data Stream Classification.- Efficacy of Some Primary Discriminant Functions in Diagnosing Planetary Gearboxes.- Biometrics and Bioinformatics Applications Identification of Persons by Virtue of Hand Geometry.- User Authentication for Mobile Devices.- Modified kNN Algorithm for Improved Recognition Accuracy of Biometrics System Based on Gait.- An Application of the Curvature Scale Space Shape Descriptor for Forensic Human Identification Based on Orthopantomograms.- The Impact of [...]

Fields of interest

Computer Communication Networks; Information Systems Applications (incl. Internet); Pattern Recognition; Software Engineering; Algorithm Analysis and Problem Complexity; Information Storage and Retrieval

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40924-0

Softcover

2013. XX, 524 p. 241 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8104)

\$107.00

ISBN 978-3-642-40924-0

usually dispatched within 3 to 5 business days

H. Bunt, Tilburg University, Tilburg, Netherlands; J. Bos, S. Pulman (Eds.)

Computing Meaning

Volume 4

This book is a collection of papers by leading researchers in computational semantics. It presents a state-of-the-art overview of recent and current research in computational semantics, including descriptions of new methods for constructing and improving resources for semantic computation, such as WordNet, VerbNet, and semantically annotated corpora. It also presents new statistical methods in semantic computation, such as the application of distributional semantics in the compositional calculation of sentence meanings. Computing the meaning of sentences, texts, and spoken or texted dialogue is the ultimate challenge in natural language processing, and the key to a wide range of [...]

Features

This book is a collection of papers by leading researchers in computational semantics. It presents a state-of-the-art overview of recent and current research in computational semantics, including descriptions of new methods for constructing and improving resources for semantic computation, such as WordNet, VerbNet, and semantically annotated corpora. It also presents new statistical methods in semantic [...]

Contents

Computing Meaning: Annotation, Representation, and Inference by Harry Bunt, Johan Bos, and Stephen Pulman.- Part I Semantic Representation and Compositionality . Deterministic Statistical Mapping of Sentences to Underspecified Semantics by Hiyun Alshawi, Pi-Chuan Chang, and Michael Ringgaard.- A formal approach to linking logical form and vector-space lexical semantics by Dan Garrette, Katrin Erk, and Raymond Mooney.- Annotations that effectively contribute to semantic interpretation by Harry Bunt.- Concrete Sentence Spaces for Compositional Distributional Models of Meaning by [...]

Fields of interest

Computing Methodologies; Computational Linguistics; Computer Appl. in Arts and Humanities; Semantics

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7283-0

Hardcover

2014. VIII, 260 p. 13 illus. (Text, Speech and Language Technology, Vol. 47)

\$129.00

ISBN 978-94-007-7283-0

usually dispatched within 3 to 5 business days

Y. Luo, Universitat Illes Balears, Palma de Mallorca, Spain (Ed.)

Cooperative Design, Visualization, and Engineering

10th International Conference, CDVE 2013, Alcudia, Spain, September 22-25, 2013, Proceedings

This book constitutes the refereed proceedings of the 10th International Conference on Cooperative Design, Visualization, and Engineering, CDVE 2013, held in Palma de Mallorca, Spain, in September 2013. The 34 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers cover all the topics of cooperative engineering, basic theories, methods and technologies that support CDVE, cooperative design, visualization and applications. There are special contributions dealing with the cooperative issues brought by the Internet of things - such as the situation in the ambient assisted living systems. Other papers in the volume cover a wide range of [...]

Features

This book constitutes the refereed proceedings of the 10th International Conference on Cooperative Design, Visualization, and Engineering, CDVE 2013, held in Palma de Mallorca, Spain, in September 2013. The 34 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers cover all the topics of cooperative engineering, basic theories, methods and technologies that [...]

Contents

Using Spatial Augmented Reality in Synchronous Collaborative Design: Applications in Architectural Design Training.- Collaborative Responsive Façade Design Using Sensor and Actuator Network.- Collaborative Design Process for Encouraging Sustainable Building Design: A Game Theory-Based Approach.- Preserving Non-verbal Features of Face-to-Face Communication for Remote Collaboration.- The Use of Media in Intercultural Dialogue "dialogo dialog"! Investigation of a Research Event in Terms of Communication without Language.- Distributed Collaboration in Engineering by Low-Latency 3D Model [...]

Fields of interest

User Interfaces and Human Computer Interaction; Information Systems Applications (incl. Internet); Computer-Aided Engineering (CAD, CAE) and Design; Pattern Recognition; Information Storage and Retrieval; Computers and Society

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40839-7

Softcover

2013. XII, 236 p. 89 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8091)

\$72.00

ISBN 978-3-642-40839-7

usually dispatched within 3 to 5 business days

A. Appice, A. Ciampi, F. Fumarola, D. Malerba

Data Mining Techniques in Sensor Networks

Summarization, Interpolation and Surveillance

Sensor networks comprise of a number of sensors installed across a spatially distributed network, which gather information and periodically feed a central server with the measured data. The server monitors the data, issues possible alarms and computes fast aggregates. As data analysis requests may concern both present and past data, the server is forced to store the entire stream. But the limited storage capacity of a server may reduce the amount of data stored on the disk. One solution is to compute summaries of the data as it arrives, and to use these summaries to interpolate the real data. This work introduces a recently defined spatio-temporal pattern, called trend cluster, to[...]

Features

Emerging real life applications, such as environmental compliance, ecological studies and meteorology, are characterized by real-time data acquisition through a number of (wireless) remote sensors. Operatively, remote sensors are installed across a spatially distributed network; they gather information along a number of attribute dimensions and periodically feed a central server with the measured data. The [...]

Contents

Introduction.- Sensor Networks and Data Streams: Basics.- Geodata Stream Summarization.- Missing Sensor Data Interpolation.- Sensor Data Surveillance.- Sensor Data Analysis Applications.

Fields of interest

Data Mining and Knowledge Discovery; Computer Communication Networks

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4471-5453-2

Softcover

2014. XIII, 105 p. 39 illus., 37 illus. in color. (Springer-Briefs in Computer Science)

\$54.99

ISBN 978-1-4471-5453-2

usually dispatched within 3 to 5 business days

P. Cudré-Mauroux, P. Ceravolo, Università degli Studi di Milano, Crema, Italy; D. Gašević (Eds.)

Data-Driven Process Discovery and Analysis

Second IFIP WG 2.6, 2.12 International Symposium, SIMPDA 2012, Campione d'Italia, Italy, June 18-20, 2012, Revised Selected Papers

This book constitutes the thoroughly refereed proceedings of the Second International Symposium on Data-Driven Process Discovery and Analysis held in Campione d'Italia, Italy, in June 2012. The six revised full papers were carefully selected from 17 submissions. To improve the quality of the contributions the symposium fostered the discussion during the presentation, giving authors the opportunity to improve their work extending the presented results. The selected papers cover topics spanning from theoretical issues related to process representation, discovery and analysis to practical and operational experiences in process discovery and analysis.

Features

This book constitutes the thoroughly refereed proceedings of the Second International Symposium on Data-Driven Process Discovery and Analysis held in Campione d'Italia, Italy, in June 2012. The six revised full papers were carefully selected from 17 submissions. To improve the quality of the contributions the symposium fostered the discussion during the presentation, giving authors the opportunity to [...]

Contents

A Lightweight RDF Data Model for Business Process Analysis.- Combination of Process Mining and Simulation Techniques for Business Process Redesign: A Methodological Approach.- Improving Business Process Models Using Observed Behavior.- Process Prediction in Noisy Data Sets: A Case Study in a Dutch Hospital.- Towards Automatic Capturing of Semi-structured Process Provenance.- Managing Structural and Textual Quality of Business Process Models.

Fields of interest

Information Systems Applications (incl. Internet); Business Information Systems; Data Mining and Knowledge Discovery

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40918-9

Softcover

2013. X, 113 p. 41 illus. (Lecture Notes in Business Information Processing, Vol. 162)

\$72.00

ISBN 978-3-642-40918-9

usually dispatched within 3 to 5 business days

J.E. Hernández, S. Liu, B. Delibasić, P. Zarató, F. Dargam, R. Ribeiro (Eds.)

Decision Support Systems II - Recent Developments Applied to DSS Network Environments

Euro Working Group Workshop, EWG-DSS 2012, Liverpool, UK, April 12-13, 2012, and Vilnius, Lithuania, July 8-11, 2012, Revised Selected and Extended Papers

This book contains extended and revised versions of a set of selected papers from two workshops organized by the Euro Working Group on Decision Support Systems (EWG-DSS), which were held in Liverpool, UK, and Vilnius, Lithuania, in April and July 2012. From a total of 33 submissions, 9 papers were accepted for publication in this edition after being reviewed by at least three internationally known experts from the EWG-DSS Program Committee and external invited reviewers. The selected papers are representative of the current research activities in the area of decision support systems, focusing on topics such as decision analysis for enterprise systems and non-hierarchical networks, [...]

Features

This book contains extended and revised versions of a set of selected papers from two workshops organized by the Euro Working Group on Decision Support Systems (EWG-DSS), which were held in Liverpool, UK, and Vilnius, Lithuania, in April and July 2012. From a total of 33 submissions, 9 papers were accepted for publication in this edition after being reviewed by at least three internationally known [...]

Contents

The Development Roadmap of the EWG-DSS Colab-Net Project: A Social Network Perspective of DSS Research Collaboration in Europe.- Testing the Seddon Model of Information System Success in an E-Learning Context: Implications for Evaluating DSS.- The Benefits of SaaS-Based Enterprise Systems for SMEs - A Literature Review.- An Operational Planning Solution for SMEs in Collaborative and Non-Hierarchical Networks.- On the Application of AHP to the Diagnostic of Portuguese SME.- A DSS Solution for Integrated Automated Bidding, Subcontractor Selection and Project Scheduling.- An Integrative[...]

Fields of interest

Computer Appl. in Administrative Data Processing; Production / Logistics; Operation Research / Decision Theory; Simulation and Modeling; Business Information Systems

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41076-5

Softcover

2013. XVI, 127 p. 30 illus. (Lecture Notes in Business Information Processing, Vol. 164)

\$72.00

ISBN 978-3-642-41076-5

usually dispatched within 3 to 5 business days

M. Brooks, J. Lovett, S. Creek

Developing B2B Social Communities

Keys to Growth, Innovation, and Customer Loyalty

Developing B2B Social Communities: Keys to Growth, Innovation, and Customer Loyalty explains why business-to-business companies need a robust online community strategy to survive and flourish in today's changing economy and shows you how to design and execute your company's strategy successfully. Seminars, publications, market research, and customer care centers remain important tools in every B2B firm's toolbox for understanding, attracting, and serving customers while keeping them loyal. But in a world of fierce global price competition, increasing transparency of business practices, and ever-rising complexity, these traditional customer interaction channels are no longer enough for[...]

Features

Developing B2B Social Communities: Keys to Growth, Innovation, and Customer Loyalty explains why business-to-business companies need a robust online community strategy to survive and flourish in today's changing economy and shows you how to design and execute your company's strategy successfully. Seminars, publications, market research, and customer care centers remain important [...]

Fields of interest

The Computer Industry

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-4713-5

Softcover

2013. 204 p.

\$29.99

ISBN 978-1-4302-4713-5

usually dispatched within 3 to 5 business days

J. Fürnkranz, TU Darmstadt, Darmstadt, Germany; E. Hüllermeier, Philipps-Universität Marburg, Marburg, Germany; T. Higuchi (Eds.)

Discovery Science

16th International Conference, DS 2013, Singapore, October 6-9, 2013, Proceedings

This book constitutes the proceedings of the 16th International Conference on Discovery Science, DS 2013, held in Singapore in October 2013, and co-located with the International Conference on Algorithmic Learning Theory, ALT 2013. The 23 papers presented in this volume were carefully reviewed and selected from 52 submissions. They cover recent advances in the development and analysis of methods of automatic scientific knowledge discovery, machine learning, intelligent data analysis, and their application to knowledge discovery.

Features

This book constitutes the proceedings of the 16th International Conference on Discovery Science, DS 2013, held in Singapore in October 2013, and co-located with the International Conference on Algorithmic Learning Theory, ALT 2013. The 23 papers presented in this volume were carefully reviewed and selected from 52 submissions. They cover recent advances in the development and analysis of methods of automatic [...]

Contents

Mixture Models from Multiresolution 0-1 Data.- Model Tree Ensembles for Modeling Dynamic Systems.- Fast and Scalable Image Retrieval Using Predictive Clustering Trees.- Avoiding Anomalies in Data Stream Learning.- Generalizing from Example Clusters.- Clustering Based Active Learning for Evolving Data Streams.- Robust Crowd Labeling Using Little Expertise.- A New Approach to String Pattern Mining with Approximate Match.- OntoDM-KDD: Ontology for Representing the Knowledge Discovery Process.- A Wordification Approach to Relational Data Mining.- Multi-interval Discretization of Continuous[...]

Fields of interest

Artificial Intelligence (incl. Robotics); Information Storage and Retrieval; Information Systems Applications (incl. Internet); Database Management; Data Mining and Knowledge Discovery; Algorithm Analysis and Problem Complexity

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40896-0

Softcover

2013. XVIII, 357 p. 104 illus. (Lecture Notes in Artificial Intelligence, Vol. 8140)

\$83.00

ISBN 978-3-642-40896-0

usually dispatched within 3 to 5 business days

J. Altmann, Seoul National University, Seoul, Korea, Republic of (South Korea); K. Vanmechelen, University of Antwerp, Antwerp, Belgium; O.F. Rana, Cardiff University, Cardiff, United Kingdom (Eds.)

Economics of Grids, Clouds, Systems, and Services

10th International Conference, GECON 2013, Zaragoza, Spain, September 18-20, 2013, Proceedings

This book constitutes the refereed proceedings of the 10th International Conference on Economics of Grids, Clouds, Systems, and Services, GECON 2013, held in Zaragoza, Spain, in September 2013. The 20 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers are organized in the following topical sections: business models, energy consumption, resource allocation, work in progress on resource allocation, work in progress on pricing, quality of service, work in progress on utility and ROI modeling.

Features

This book constitutes the refereed proceedings of the 10th International Conference on Economics of Grids, Clouds, Systems, and Services, GECON 2013, held in Zaragoza, Spain, in September 2013. The 20 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers are organized in the following topical sections: business models, energy consumption, resource [...]

Contents

Business Models.- Energy Consumption.- Resource Allocation.- Work in Progress on Resource Allocation.- Work in Progress on Pricing.- Quality of Service.- Work in Progress on Utility and ROI Modeling.

Fields of interest

Computer Communication Networks; Information Systems and Communication Service; Management of Computing and Information Systems

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-02413-4

Softcover

2013. XVIII, 281 p. 75 illus. (Computer Communication Networks and Telecommunications, Vol. 8193)

\$72.00

ISBN 978-3-319-02413-4

usually dispatched within 3 to 5 business days

J.P. Bowen, S. Keene, K. Ng (Eds.)

Electronic Visualisation in Arts and Culture

Presenting the latest technological developments in arts and culture, this volume demonstrates the advantages of a union between art and science. Electronic Visualisation in Arts and Culture is presented in five parts: Imaging and Culture, New Art Practice, Seeing Motion, Interaction and Interfaces, Visualising Heritage. Electronic Visualisation in Arts and Culture explores a variety of new theory and technologies, including devices and techniques for motion capture for music and performance, advanced photographic techniques, computer generated images derived from different sources, game engine software, airflow to capture the motions of bird flight and low-altitude imagery from airborne[...]

Features

Presenting the latest technological developments in arts and culture, this volume demonstrates the advantages of a union between art and science. Electronic Visualisation in Arts and Culture is presented in five parts: Imaging and Culture, New Art Practice, Seeing Motion, Interaction and Interfaces, Visualising Heritage. Electronic [...]

Contents

Foreword.- Preface.- The EVA London Conference 1990–2012: Personal Reflections.- Part I – Imaging and Culture.- From Descriptions to Duplicates to Data.- Quantifying Culture: Four Types of Value in Visualisation.- Embodied Airborne Imagery: Low-Altitude Cinematic Urban Topography.- Back to Paper? An Alternative Approach to Conserving Digital Images into the 23rd Century.- Part II – New Art Practice.- Light Years: Jurassic Coast – An Immersive 3D Landscape Project.- Photography as a Tool of Alienation: Aura.- Fugue and Variations on some Themes in Art and Science.- Part III – Seeing[...]

Fields of interest

Computer Imaging, Vision, Pattern Recognition and Graphics; User Interfaces and Human Computer Interaction; Cultural Studies; Cultural Heritage; Arts; Computer Appl. in Arts and Humanities

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4471-5405-1

Hardcover

2013. XII, 291 p. 130 illus., 92 illus. in color. (Springer Series on Cultural Computing)

\$109.00

ISBN 978-1-4471-5405-1

usually dispatched within 3 to 5 business days

K.D. Pimple, Indiana University, Bloomington, USA (Ed.)

Emerging Pervasive Information and Communication Technologies (PICT)

Ethical Challenges, Opportunities and Safeguards

This book provides a wide and deep perspective on the ethical issues raised by pervasive information and communication technology (PICT) – small, powerful, and often inexpensive Internet-connected computing devices and systems. It describes complex and unfamiliar technologies and their implications, including the transformative potential of augmented reality, the power of location-linked information, and the uses of “big data,” and explains potential threats, including privacy invaded, security violated, and independence compromised, often through widespread and lucrative manipulation. PICT is changing how we live, providing entertainment, useful tools, and life-saving systems. But the[...]

Features

This book provides a wide and deep perspective on the ethical issues raised by pervasive information and communication technology (PICT) – small, powerful, and often inexpensive Internet-connected computing devices and systems. It describes complex and unfamiliar technologies and their implications, including the transformative potential of augmented reality, the power of location-linked information, [...]

Contents

Contributors.- List of Abbreviations.- Acknowledgments; Kenneth D. Pimple.- 1. Introduction; Kenneth D. Pimple.- 2. Three Case Studies; Donald R. Searing and Elizabeth A.M. Searing.- 3. Health information in the background; Lisa M. Lee.- 4. Surveillance in the Big Data Era; Mark Andrejevic.- 5. We know where you are. And we're more and more sure what that means; Francis Harvey.- 6. Preserving life, destroying privacy; Cynthia M. Jones.- 7. When cutting edge technology meets clinical practice; Katherine D. Seelman, Linda M. Hartman, and Daihua Yu.- 8 Ethics and pervasive augmented[...]

Fields of interest

Computers and Society; Ethics; Public International Law; Media Law

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-6832-1

Hardcover

2014. X, 252 p. 10 illus., 2 illus. in color. (Law, Governance and Technology Series, Vol. 11)

\$109.00

ISBN 978-94-007-6832-1

usually dispatched within 3 to 5 business days

L.S. Iliadis, Democritus University of Thrace, Orestiada Thrace, Greece; H. Papadopoulos, Frederick University, Nicosia, Cyprus; C. Jayne (Eds.)

Engineering Applications of Neural Networks

14th International Conference, EANN 2013, Halkidiki, Greece, September 2013, Proceedings, Part I

The two volume set, CCIS 383 and 384, constitutes the refereed proceedings of the 14th International Conference on Engineering Applications of Neural Networks, EANN 2013, held on Halkidiki, Greece, in September 2013. The 91 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers describe the applications of artificial neural networks and other soft computing approaches to various fields such as pattern recognition-predictors, soft computing applications, medical applications of AI, fuzzy inference, evolutionary algorithms, classification, learning and data mining, control techniques-aspects of AI evolution, image and video analysis.[...]

Features

The two volume set, CCIS 383 and 384, constitutes the refereed proceedings of the 14th International Conference on Engineering Applications of Neural Networks, EANN 2013, held on Halkidiki, Greece, in September 2013. The 91 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers describe the applications of artificial neural networks and other soft computing [...]

Fields of interest

Data Mining and Knowledge Discovery; Pattern Recognition; Computer Appl. in Administrative Data Processing; Computation by Abstract Devices; Artificial Intelligence (incl. Robotics); Computer Communication Networks

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41012-3

Softcover

2013. XXIV, 510 p. 189 illus. (Communications in Computer and Information Science, Vol. 383)

\$119.00

ISBN 978-3-642-41012-3

usually dispatched within 3 to 5 business days

L.S. Iliadis, Democritus University of Thrace, Orestiada Thrace, Greece; H. Papadopoulos, Frederick University, Nicosia, Cyprus; C. Jayne (Eds.)

Engineering Applications of Neural Networks

14th International Conference, EANN 2013, Halkidiki, Greece, September 2013, Proceedings, Part II

The two volume set, CCIS 383 and 384, constitutes the refereed proceedings of the 14th International Conference on Engineering Applications of Neural Networks, EANN 2013, held on Halkidiki, Greece, in September 2013. The 91 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers describe the applications of artificial neural networks and other soft computing approaches to various fields such as pattern recognition-predictors, soft computing applications, medical applications of AI, fuzzy inference, evolutionary algorithms, classification, learning and data mining, control techniques-aspects of AI evolution, image and video analysis, [...]

Features

The two volume set, CCIS 383 and 384, constitutes the refereed proceedings of the 14th International Conference on Engineering Applications of Neural Networks, EANN 2013, held on Halkidiki, Greece, in September 2013. The 91 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers describe the applications of artificial neural networks and other soft computing [...]

Fields of interest

Data Mining and Knowledge Discovery; Pattern Recognition; Computer Appl. in Administrative Data Processing; Computation by Abstract Devices; Artificial Intelligence (incl. Robotics); Computer Communication Networks

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41015-4

Softcover

2013. XXIV, 326 p. 93 illus. (Communications in Computer and Information Science, Vol. 384)

\$95.00

ISBN 978-3-642-41015-4

usually dispatched within 3 to 5 business days

J.C. Anacleto, Universidade Federal de São Carlos, São Paulo, Brazil; E.W.G. Clua, Universidade Federal Fluminense, Rio de Janeiro, Brazil; F.S. Correa da Silva, Universidade de São Paulo, São Paulo, Brazil; S. Fels, University of British Columbia, Vancouver, Canada; H.S. Yang, KAIST CS, Daejeon, Korea, Republic of (South Korea) (Eds.)

Entertainment Computing -- ICEC 2013

12th International Conference, ICEC 2013, São Paulo, Brazil, October 16-18, 2013, Proceedings

This book constitutes the refereed proceedings of the 12th International Conference on Entertainment Computing, ICEC 2013, held in São Paulo, Brazil, in October 2013. The 13 full papers, 6 short papers, 11 posters presented were carefully reviewed and selected from 75 submissions. In addition to these papers, the program featured 2 demos, 3 workshops, 3 tutorials and 3 art installations, also summarized in this book. The papers cover various topics in the multi-disciplinary field of entertainment computing.

Features

This book constitutes the refereed proceedings of the 12th International Conference on Entertainment Computing, ICEC 2013, held in São Paulo, Brazil, in October 2013. The 13 full papers, 6 short papers, 11 posters presented were carefully reviewed and selected from 75 submissions. In addition to these papers, the program featured 2 demos, 3 workshops, 3 tutorials and 3 art installations, also summarized in [...]

Contents

An Empirical Examination of Behavioral Factors in Creative Development of Game Prototypes.- A New Chess Variant for Gaming AI.- Systematic Review of Game Design Methods and Tools.- Augmented Home: Integrating a Virtual World Game in a Physical Environment.- Debunking Differences between Younger and Older Adults Using a Collaborative Virtual Environment.- Exploring Opponent Formats: Game Mechanics for Computer-Supported Physical Games.- Investigating the Role of Composition Conventions in Three-Move Mate Problems.- Mappets: An Interactive Plugin for Transmedia Machinima on [...]

Fields of interest

Personal Computing; User Interfaces and Human Computer Interaction; Computer Graphics; Computing Milieux; Media Design; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41105-2

Softcover

2013. XIV, 214 p. 72 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8215)

\$94.00

ISBN 978-3-642-41105-2

usually dispatched within 3 to 5 business days

J. Hřebíček, Masaryk University, Brno, Czech Republic; G. Schimak, Österr. Forschungszentrum, Seibersdorf, Austria; M. Kubásek, Masaryk University, Brno, Czech Republic; A.E. Rizzoli, Istituto Dalle Molle di Studi, Manno, Switzerland (Eds.)

Environmental Software Systems. Fostering Information Sharing

10th IFIP WG 5.11 International Symposium, ISESS 2013, Neusiedl am See, Austria, October 9-11, 2013, Proceedings

This book constitutes the refereed proceedings of the 10th IFIP WG 5.11 International Symposium on Environmental Software Systems, ISESS 2013, held in Neusiedl am See, Austria, in June 2013. The 65 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers are organized in the following topical sections: environmental application in the scope of the future Internet; smart and mobile devices used for environmental applications; information tools for global environmental assessment; environmental applications in risk and crises management; SEIS as a part of the 7th environment action programme of EU; human interaction and human factors [...]

Features

This book constitutes the refereed proceedings of the 10th IFIP WG 5.11 International Symposium on Environmental Software Systems, ISESS 2013, held in Neusiedl am See, Austria, in June 2013. The 65 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers are organized in the following topical sections: environmental application in the scope of the future [...]

Contents

Environmental application in the scope of the future Internet.- Smart and mobile devices used for environmental applications.- Information tools for global environmental assessment.- Environmental applications in risk and crises management.- SEIS as a part of the 7th environment action programme of EU.- Human interaction and human factors driving future EIS/EDSS developments.- Environmental management/-accounting and-statistics.- Information systems and applications.

Fields of interest

Information Systems and Communication Service; Artificial Intelligence (incl. Robotics); Computer Communication Networks; Software Engineering

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41150-2

Hardcover

2013. XXII, 699 p. 248 illus. (IFIP Advances in Information and Communication Technology, Vol. 413)

\$209.00

ISBN 978-3-642-41150-2

usually dispatched within 3 to 5 business days

J.A. Botia, Universidad de Murcia, Murcia, Spain; J.A. Alvarez-Garcia, University of Seville, Seville, Spain; K. Fujinami, University of Agriculture and Technology, Tokyo, Japan; P. Barsocchi, Italian National Research Council Inst., Pisa, Italy; T. Riedel, Karlsruhe Institute of Technology, Karlsruhe, Germany (Eds.)

Evaluating AAL Systems Through Competitive Benchmarking

International Competitions and Final Workshop, July and September 2013. Proceedings

This book constitutes the refereed proceedings of the international competition aimed at the evaluation and assessment of Ambient Assisted Living, EvAAL 2013, which was organized in three major events: the International Competition on Indoor Localization and Tracking for Ambient Assisted Living, which took place in Madrid, Spain, in July 2013; the International Competition on Activity Recognition for Ambient Assisted Living, which took place in Valencia, Spain, in July 2013; and the Final Workshop, which was held in Norrköping, Sweden, in September 2013. The papers included in this book describe the organization and technical aspects of the competitions, and provide a complete[...]

Features

This book constitutes the refereed proceedings of the international competition aimed at the evaluation and assessment of Ambient Assisted Living, EvAAL 2013, which was organized in three major events: the International Competition on Indoor Localization and Tracking for Ambient Assisted Living, which took place in Madrid, Spain, in July 2013; the International Competition on Activity Recognition for Ambient [...]

Fields of interest

System Performance and Evaluation; Special Purpose and Application-Based Systems; Computers and Society; Information Systems Applications (incl.Internet); Computer Applications

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41042-0

Softcover

2013. XII, 141 p. 77 illus. (Communications in Computer and Information Science, Vol. 386)

\$84.00

ISBN 978-3-642-41042-0

usually dispatched within 3 to 5 business days

A. al-Azzawi, University of Surrey, Guildford, United Kingdom

Experience with Technology

Dynamics of User Experience with Mobile Media Devices

With a focus on gaining an empirically derived understanding of the underlying psychological dimensions and processes behind people's experiences with technology, this book contributes to the debate of user experience (UX) within several disciplines, including HCI, design and marketing. It analyses UX dynamics at various time scales, and explores the very nature of time and meaning in the context of UX. Experience with Technology uses personal construct theory (PCT) as a theoretical and methodological starting point to this project. Major case-studies are described that examine people's experiences with mobile media devices. The results show a group of super-ordinate constructs that, [...]

Features

With a focus on gaining an empirically derived understanding of the underlying psychological dimensions and processes behind people's experiences with technology, this book contributes to the debate of user experience (UX) within several disciplines, including HCI, design and marketing. It analyses UX dynamics at various time scales, and explores the very nature of time and meaning in the context of [...]

Contents

Foreword by David Frohlich and Margaret Wilson.- Preface.- Introduction.- Theories of Experience.- Measuring Experience.- Construct Dynamics: Interaction.- Construct Dynamics: Consumption.- ICE: A Model of Experience with Technology.- Conclusions.- Appendices.

Fields of interest

User Interfaces and Human Computer Interaction; Psychological Methods / Evaluation; Interdisciplinary Studies

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4471-5396-2

Softcover

2014. XV, 142 p. 55 illus. (SpringerBriefs in Computer Science)

\$54.99

ISBN 978-1-4471-5396-2

usually dispatched within 3 to 5 business days

M. Rochkind

Expert PHP and MySQL

Application Design and Development

Expert PHP and MySQL takes you beyond learning syntax to showing you how to apply proven software development methods to building commerce-grade PHP and MySQL projects that will stand the test of time and reliably deliver on customer needs. Developers of real-world applications face numerous problems that seem trivial on the surface, but really do take some skill to get right. Error handling is about more than just the mechanics in the PHP syntax, but also about handling MySQL errors, logging those errors, and about hiding information about application internals that error messages sometimes can expose. Meet these challenges and more head-on! Author Marc Rochkind shows how to begin[...]

Features

Expert PHP and MySQL takes you beyond learning syntax to showing you how to apply proven software development methods to building commerce-grade PHP and MySQL projects that will stand the test of time and reliably deliver on customer needs. Developers of real-world applications face numerous problems that seem trivial on the surface, but really do take some skill to get right. Error [...]

Fields of interest

Computer Science (general)

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-6007-3

Softcover

2013. XVIII, 308 p. 126 illus.

\$59.99

ISBN 978-1-4302-6007-3

usually dispatched within 3 to 5 business days

H.L. Larsen, Aalborg University, Esbjerg, Denmark; M.J. Martín-Bautista, University of Granada, Granada, Spain; M.A. Vila, University of Granada, Granada, Spain; T. Andreassen, Roskilde University, Roskilde, Denmark; H. Christiansen, Roskilde University, Roskilde, Denmark (Eds.)

Flexible Query Answering Systems

10th International Conference, FQAS 2013, Granada, Spain, September 18-20, 2013. Proceedings

This book constitutes the refereed proceedings of the 10th International Conference on Flexible Query Answering Systems, FQAS 2013, held in Granada, Spain, in September 2013. The 59 full papers included in this volume were carefully reviewed and selected from numerous submissions. The papers are organized in a general session train and a parallel special session track. The general session train covers the following topics: querying-answering systems; semantic technology; patterns and classification; personalization and recommender systems; searching and ranking; and Web and human-computer interaction. The special track covers some specific and, typically, newer fields, namely:[...]

Features

This book constitutes the refereed proceedings of the 10th International Conference on Flexible Query Answering Systems, FQAS 2013, held in Granada, Spain, in September 2013. The 59 full papers included in this volume were carefully reviewed and selected from numerous submissions. The papers are organized in a general session train and a parallel special session track. The general session train covers the [...]

Contents

Querying-answering systems.- Semantic technology.- Patterns and classification.- Personalization and recommender systems.- Searching and ranking.- Web and human-computer interaction.- Environmental scanning for strategic early warning.- Generating linguistic descriptions of data.- Advances in fuzzy querying and fuzzy databases: theory and applications.- Fusion and ensemble techniques for online learning on data streams.- Intelligent information extraction from texts.

Fields of interest

Artificial Intelligence (incl. Robotics); Information Storage and Retrieval; Data Mining and Knowledge Discovery; Database Management; Information Systems Applications (incl.Internet); Language Translation and Linguistics

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40768-0

Softcover

2013. XVI, 694 p. 208 illus. (Lecture Notes in Artificial Intelligence, Vol. 8132)

\$131.00

ISBN 978-3-642-40768-0

usually dispatched within 3 to 5 business days

W. Aspray, University of Texas, Austin, USA; G. Royer, University of Texas, Austin, USA; M.G. Ocepek, University of Texas, Austin, USA

Food in the Internet Age

This book examines food in the United States in the age of the Internet. One major theme running through the book is business opportunities and failures, as well as the harms to consumers and traditional brick-and-mortar companies that occurred as entrepreneurs tried to take advantage of the Internet to create online companies related to food. The other major theme is the concept of trust online and different models used by different companies to make their web presence seem trustworthy. The book describes a number of major food companies, including AllRecipes, Betty Crocker, Cook's Illustrated, Epicurious, Groupon, OpenTable, and Yelp. The book draws on business history, food[...]

Features

This book examines food in the United States in the age of the Internet. One major theme running through the book is business opportunities and failures, as well as the harms to consumers and traditional brick-and-mortar companies that occurred as entrepreneurs tried to take advantage of the Internet to create online companies related to food. The other major theme is the concept of trust online and different [...]

Contents

Food Online: An Introduction to a Complex Environment.- Anatomy of a Dot-Com Failure: The Case of Online Grocer Webvan.- The Dark Side of Online Food Businesses.- Harms to Consumers and Main-Street Businesses.- Trust Online: From Amazon to Recipe Sharing.

Fields of interest

Information Systems Applications (incl.Internet); Food Science; Operation Research / Decision Theory; Business Information Systems

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-01597-2

Softcover

2013. XII, 83 p. 16 illus. (SpringerBriefs in Food, Health, and Nutrition)

\$54.99

ISBN 978-3-319-01597-2

usually dispatched within 3 to 5 business days

L. Groves, Victoria University of Wellington, Wellington, New Zealand; J. Sun, The University of Auckland, Auckland, New Zealand (Eds.)

Formal Methods and Software Engineering

15th International Conference on Formal Engineering Methods, ICFEM 2013, Queenstown, New Zealand, October 29 - November 1, 2013, Proceedings

This book constitutes the refereed proceedings of the 15th International Conference on Formal Engineering Methods, ICFEM 2013, held in Queenstown, New Zealand, in October/November 2013. The 28 revised full papers together with 2 keynote speeches presented were carefully reviewed and selected from 88 submissions. The topics covered are abstraction and refinement, formal specification and modeling, program analysis, software verification, formal methods for software safety, security, reliability and dependability, tool development, integration and experiments involving verified systems, formal methods used in certifying products under international standards, and formal model-based[...]

Features

This book constitutes the refereed proceedings of the 15th International Conference on Formal Engineering Methods, ICFEM 2013, held in Queenstown, New Zealand, in October/November 2013. The 28 revised full papers together with 2 keynote speeches presented were carefully reviewed and selected from 88 submissions. The topics covered are abstraction and refinement, formal specification and modeling, program [...]

Contents

Keynote.- Lattices of Information for Security: Deterministic, Demonic, Probabilistic.- Specification.- Algebraic Laws for Process Subtyping.- Boundness Issues in CCSL Specifications.- Mining Dataflow Sensitive Specifications.- Proof.- A Proof Slicing Framework for Program Verification.- Formally Verified System Initialisation.- Verifying an Aircraft Proximity Characterization Method in Coq.- Testing.- Assisting Specification Refinement by Random Testing.- Generation of Checking Sequences Using Identification Sets.- The Circus Testing Theory Revisited in Isabelle/HOL.- Timed Systems.- A[...]

Fields of interest

Software Engineering; Programming Techniques; Programming Languages, Compilers, Interpreters; Algorithm Analysis and Problem Complexity; Mathematical Logic and Formal Languages; Computer Communication Networks

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41201-1

Softcover

2013. XVIII, 466 p. 136 illus. (Programming and Software Engineering, Vol. 8144)

\$95.00

ISBN 978-3-642-41201-1

usually dispatched within 3 to 5 business days

M. Dierkes, Rockwell Collins France, Blagnac, France; C. Pecheur, Université catholique de Louvain, Louvain-la-Neuve, Belgium (Eds.)

Formal Methods for Industrial Critical Systems

18th International Workshop, FMICS 2013, Madrid, Spain, September 23-24, 2013, Proceedings

This book constitutes the thoroughly refereed conference proceedings of the 18th International Workshop on Formal Methods for Industrial Critical Systems, FMICS 2013, held in Madrid, Spain, in September 2013. The 13 papers presented were carefully selected from 25 submissions and cover topics such as design, specification, code generation and testing based on formal methods, methods, techniques and tools to support automated analysis, certification, debugging, learning, optimization and transformation of complex, distributed, dependable, real-time systems and embedded systems, verification and validation methods, tools for the development of formal design descriptions, case studies[...]

Features

This book constitutes the thoroughly refereed conference proceedings of the 18th International Workshop on Formal Methods for Industrial Critical Systems, FMICS 2013, held in Madrid, Spain, in September 2013. The 13 papers presented were carefully selected from 25 submissions and cover topics such as design, specification, code generation and testing based on formal methods, methods, techniques and tools to [...]

Contents

Formal Methods for the Analysis of Critical Control Systems Models: Combining Non-linear and Linear Analyses.- HyRev: A Tool for the Automatic Generation of Real-Time Routines for Enabling Fail-Safe Control in a Class of Safety-Critical Embedded Systems Using Backwards Reachability Analysis.- An Outline Workflow for Practical Formal Verification from Software Requirements to Object Code.- Boolean Quantifier Elimination for Automotive Configuration – A Case Study.- Study on the Barriers to the Industrial Adoption of Formal Methods.- On the Effectiveness of Assertion-Based Verification in[...]

Fields of interest

Software Engineering; Logics and Meanings of Programs; Special Purpose and Application-Based Systems; Mathematical Logic and Formal Languages; Computation by Abstract Devices

Target groups

Professional/practitioner

Type of publication

Proceedings

More on www.springer.com/978-3-642-41009-3

Softcover

2013. XIV, 199 p. 46 illus. (Programming and Software Engineering, Vol. 8187)

\$72.00

ISBN 978-3-642-41009-3

usually dispatched within 3 to 5 business days

J. Iyoda, UFPE, Recife, Brazil; L. de Moura (Eds.)

Formal Methods: Foundations and Applications

16th Brazilian Symposium, SBMF 2013, Brasilia, Brazil, September 29 - October 4, 2013. Proceedings

This book constitutes the refereed proceedings of the 16th Brazilian Symposium on Formal Methods, SBMF 2013, held in Brasilia, Brazil, in September/October 2013. The 14 revised full papers presented together with 2 keynotes were carefully reviewed and selected from 29 submissions. The papers presented cover a broad range of foundational and methodological issues in formal methods for the design and analysis of software and hardware systems as well as applications in various domains.

Features

This book constitutes the refereed proceedings of the 16th Brazilian Symposium on Formal Methods, SBMF 2013, held in Brasilia, Brazil, in September/October 2013. The 14 revised full papers presented together with 2 keynotes were carefully reviewed and selected from 29 submissions. The papers presented cover a broad range of foundational and methodological issues in formal methods for the design and analysis of [...]

Fields of interest

Computer Science (general)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41070-3

Softcover

2013. X, 243 p. 81 illus. (Programming and Software Engineering, Vol. 8195)

\$72.00

ISBN 978-3-642-41070-3

usually dispatched within 3 to 5 business days

M. Aramaki, CNRS-INCM, Marseille, France; M. Barthet, Queen Mary University, London, United Kingdom; R. Kronland-Martinet, CNRS-LMA, Marseille Cedex 20, France; S. Ystad, CNRS - LMA, Marseille Cedex 20, France (Eds.)

From Sounds to Music and Emotions

9th International Symposium CMMR 2012, London, UK, June 19-22, 2012, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 9th International Symposium on Computer Music Modeling and Retrieval, CMMR 2012, held in London, UK, in June 2012. The 28 revised full papers presented were carefully reviewed and selected for inclusion in this volume. The papers have been organized in the following topical sections: music emotion analysis; 3D audio and sound synthesis; computer models of music perception and cognition; music emotion recognition; music information retrieval; film soundtrack and music recommendation; and computational musicology and music education. The volume also includes selected papers from the Cross-Disciplinary[...]

Features

This book constitutes the thoroughly refereed post-conference proceedings of the 9th International Symposium on Computer Music Modeling and Retrieval, CMMR 2012, held in London, UK, in June 2012. The 28 revised full papers presented were carefully reviewed and selected for inclusion in this volume. The papers have been organized in the following topical sections: music emotion analysis; 3D audio and sound [...]

Contents

The Six Emotion-Face Clock as a Tool for Continuously Rating Discrete Emotional Responses to Music.- Emotion in Motion: A Study of Music and Affective Response.- Psychophysiological Measures of Emotional Response to Romantic Orchestral Music and Their Musical and Acoustic Correlates.- Two-Dimensional Hybrid Spatial Audio Systems with User Variable Controls of Sound Source Attributes.- Perceptual Characteristic and Compression Research in 3D Audio Technology.- Intuitive Control of Rolling Sound Synthesis.- EarGram: An Application for Interactive Exploration of Concatenative Sound[...]

Fields of interest

Information Storage and Retrieval; Music; Multimedia Information Systems; Computer Appl. in Arts and Humanities; User Interfaces and Human Computer Interaction; Special Purpose and Application-Based Systems

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41247-9

Softcover

2013. XIV, 502 p. 159 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 7900)

\$107.00

ISBN 978-3-642-41247-9

usually dispatched within 3 to 5 business days

P. Fontaine, C. Ringeissen, R. Schmidt, University of Manchester, Manchester, United Kingdom (Eds.)

Frontiers of Combining Systems

9th International Symposium, FroCoS 2013, Nancy, France, September 18-20, 2013, Proceedings

This book constitutes the refereed proceedings of the 9th International Symposium on Frontiers of Combining Systems, FroCoS 2013, held in Nancy, France, in September 2013. The 20 revised full papers presented together with 4 invited papers were carefully reviewed and selected from 33 submissions. FroCoS'13 seeks to offer a common forum for research in the general area of combination, modularization and integration of systems, with emphasis on logic-based ones, and of their practical use. Typical topics of interest include following subjects: combinations of logics such as combined predicate, temporal, modal or epistemic logics, combinations and modularity in ontologies, combination of [...]

Features

This book constitutes the refereed proceedings of the 9th International Symposium on Frontiers of Combining Systems, FroCoS 2013, held in Nancy, France, in September 2013. The 20 revised full papers presented together with 4 invited papers were carefully reviewed and selected from 33 submissions. FroCoS'13 seeks to offer a common forum for research in the general area of combination, modularization and [...]

Contents

Invited Talk 1.- MetiTarski's Menagerie of Cooperating Systems.- Inductive Theorem Proving.- Combining Superposition and Induction: A Practical Realization.- Arrays and Memory Access Optimization.- Definability of Accelerated Relations in a Theory of Arrays and Its Applications.- Verification of Composed Array-Based Systems with Applications to Security-Aware Workflows.- Presburger Arithmetic in Memory Access Optimization for Data-Parallel Languages.- Approximation and Forgetting.- Roughening the EL Envelope.- Uniform Interpolation of ALC-Ontologies Using Fixpoints.- Abduction in Logic[...]

Fields of interest

Artificial Intelligence (incl. Robotics); Mathematical Logic and Formal Languages; Logics and Meanings of Programs; Software Engineering; Algorithm Analysis and Problem Complexity; Programming Techniques

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40884-7

Softcover

2013. XII, 359 p. 35 illus. (Lecture Notes in Artificial Intelligence, Vol. 8152)

\$83.00

ISBN 978-3-642-40884-7

usually dispatched within 3 to 5 business days

F. Arabab, M. Sirjani (Eds.)

Fundamentals of Software Engineering

5th International Conference, FSEN 2013, Tehran, Iran, April 24-26, 2013, Revised Selected Papers

This book constitutes the proceedings of the 5th IPM International Conference on Fundamentals of Software Engineering, FSEN 2013, held in Tehran, Iran, in April 2013. The 17 full papers presented in this volume were carefully reviewed and selected from 65 submissions. The topics of interest in FSEN span over all aspects of formal methods, especially those related to advancing the application of formal methods in software industry and promoting their integration with practical engineering techniques.

Features

This book constitutes the proceedings of the 5th IPM International Conference on Fundamentals of Software Engineering, FSEN 2013, held in Tehran, Iran, in April 2013. The 17 full papers presented in this volume were carefully reviewed and selected from 65 submissions. The topics of interest in FSEN span over all aspects of formal methods, especially those related to advancing the application of formal methods [...]

Contents

Unbounded Allocation in Bounded Heaps.- On the Complexity of Adding Convergence.- Deadlock Checking by Data Race Detection.- Delta Modeling and Model Checking of Product Families.- Lending Petri Nets and Contracts.- On Efficiency Preorders.- Compiling Cooperative Task Management to Continuations.- Extending UPPAAL for the Modeling and Verification of Dynamic Real-Time Systems.- Efficient Operational Semantics for EB3 for Verification of Temporal Properties.- Interval Soundness of Resource-Constrained Workflow Nets: Decidability and Repair.- Statistical Model Checking of a Clock[...]

Fields of interest

Logics and Meanings of Programs; Software Engineering

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40212-8

Softcover

2013. XIX, 283 p. 85 illus. (Programming and Software Engineering, Vol. 8161)

\$94.00

ISBN 978-3-642-40212-8

usually dispatched within 3 to 5 business days

G. O'Regan

Giants of Computing

A Compendium of Select, Pivotal Pioneers

It has been upon the shoulders of giants that the modern world has been forged. This accessible compendium presents an insight into the great minds responsible for the technology which has transformed our lives. Each pioneer is introduced with a brief biography, followed by a concise account of their key contributions to their discipline. The selection covers a broad spread of historical and contemporary figures from theoreticians to entrepreneurs, highlighting the richness of the field of computing. Suitable for the general reader, this concise and easy-to-read reference will be of interest to anyone curious about the inspiring men and women who have shaped the field of computer science.

Features

It has been upon the shoulders of giants that the modern world has been forged. This accessible compendium presents an insight into the great minds responsible for the technology which has transformed our lives. Each pioneer is introduced with a brief biography, followed by a concise account of their key contributions to their discipline. The selection covers a broad spread of historical and [...]

Contents

Background.- Howard Aiken.- Gene Amdahl.- Archimedes.- John Atanasoff.- Charles Babbage.- John Backus.- Gordon Bell.- Tim Berners-Lee.- Dines Björner.- George Boole.- Fred Brooks.- Vannevar Bush.- Vint Cerf.- Alonzo Church.- Noam Chomsky.- Edgar Codd.- René Descartes.- Tom DeMarco.- Edsger Dijkstra.- George Devol.- Larry Ellison.- Don Estridge.- Michael Fagan.- Tommy Flowers.- Robert Floyd.- Bill Gates.- James Gosling.- C.A.R Hoare.- Heman Hollerith.- Watts Humphrey.- Kenneth Iverson.- Ivar Jacobson.- Steve Jobs.- Gary Kildall.- Donald Knuth.- Gottfried Wilhelm Leibniz.- Ada Lovelace.- [...]

Fields of interest

History of Computing; History of Science; Artificial Intelligence (incl. Robotics); Programming Languages, Compilers, Interpreters

Target groups

Upper undergraduate

Type of publication

Undergraduate textbook

More on www.springer.com/978-1-4471-5339-9

Hardcover

2013. XXI, 306 p. 113 illus.

\$59.99

ISBN 978-1-4471-5339-9

usually dispatched within 3 to 5 business days

I. Oakley, S. Brewster, University of Glasgow, Glasgow, United Kingdom (Eds.)

Haptic and Audio Interaction Design

8th International Workshop, HAID 2013, Daejeon, Korea, April 18-19, 2013, Revised Selected Papers

This book constitutes the refereed proceedings of the 8th International Conference on Haptic and Audio Interaction Design, HAID 2013, held in Daejeon, Korea, in April 2013. The 14 full papers presented were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on non-intrusive and thermal haptics, new interfaces and interactions, emotion and affect, music, and mobile devices and applications.

Features

This book constitutes the refereed proceedings of the 8th International Conference on Haptic and Audio Interaction Design, HAID 2013, held in Daejeon, Korea, in April 2013. The 14 full papers presented were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on non-intrusive and thermal haptics, new interfaces and interactions, emotion and affect, [...]

Contents

Non-intrusive and Thermal Haptics.- New Interfaces and Interactions.- Emotion and Affect.- Music.- Mobile Devices and Applications.

Fields of interest

User Interfaces and Human Computer Interaction; Information Systems Applications (incl. Internet); Multimedia Information Systems; Computers and Society; Models and Principles; Computers and Education

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41067-3

Softcover

2013. XII, 137 p. 46 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 7989)

\$72.00

ISBN 978-3-642-41067-3

usually dispatched within 3 to 5 business days

T. Bosse, VU University Amsterdam, Amsterdam, Netherlands; D.J. Cook, M. Neerincx, Delft University of Technology, Delft, Netherlands; F. Sadri, Imperial College London, London, United Kingdom (Eds.)

Human Aspects in Ambient Intelligence

Contemporary Challenges and Solutions

This book presents recent developments in the field of human aspects in Ambient Intelligence. This field, and the associated workshop series, addresses multidisciplinary aspects of AmI with human-directed disciplines such as psychology, social science, neuroscience and biomedical sciences. The aim of the workshop series is to get researchers together from these human-directed disciplines or working on cross connections of AmI with these disciplines. The focus is on the use of knowledge from these disciplines in AmI applications, in order to support humans in their daily living in medical, psychological and social respects. The book plays an important role to get modellers in the [...]

Features

This book presents recent developments in the field of human aspects in Ambient Intelligence. This field, and the associated workshop series, addresses multidisciplinary aspects of AmI with human-directed disciplines such as psychology, social science, neuroscience and biomedical sciences. The aim of the workshop series is to get researchers together from these human-directed disciplines or working on cross [...]

Contents

A Clustering Approach to Intention Recognition.- Adaptive Autonomy in Unmanned Ground Vehicles Using Trust Models.- Automated Analysis of Non-Verbal Expressive Gesture.- Behaviometrics for Identifying Smart Home Residents.- SoundingARM - Assisted Representation of a Map.- Ambient Support by a Virtual Coach for Exercising and Rehabilitation.- Using Multiple Self Theory of Planner and Doer as a Virtual Coaching Framework for Changing Lifestyles: The role of Expert, Motivator and Mentor Coaches.- A Network of Sensor and Actuator Agents for Building Automation Systems.- From Mobile [...]

Fields of interest

Artificial Intelligence (incl. Robotics); User Interfaces and Human Computer Interaction; Computer Applications; Health Informatics; Simulation and Modeling

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-6239-017-1

Hardcover

2013. VIII, 172 p. 58 illus. (Atlantis Ambient and Pervasive Intelligence, Vol. 8)

\$109.00

ISBN 978-94-6239-017-1

usually dispatched within 3 to 5 business days

P. Campos, Universidade da Madeira, Funchal, Portugal; T. Clemmensen, J. Abdelnour Nocera, University of West London, London, United Kingdom; D. Katre, A. Lopes, Madeira Interactive Technologies Inst., Funchal, Portugal; R. Ørngreen, Aalborg University, Copenhagen SV, Denmark (Eds.)

Human Work Interaction Design. Work Analysis and HCI

Third IFIP 13.6 Working Conference, HWID 2012, Copenhagen, Denmark, December 5-6, 2012, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the Third IFIP WG 13.6 Working Conference on Human Work Interaction Design, HWID 2012, held in Copenhagen, Denmark, in December 2012. The 16 revised papers presented were carefully selected for inclusion in this volume. The papers reflect many different areas and address many complex and diverse work domains, ranging from medical user interfaces, work and speech interactions at elderly care facilities, greenhouse climate control, navigating through large oil industry engineering models, crisis management, library usability, and mobile probing. They have been organized in the following topical sections: work [...]

Features

This book constitutes the thoroughly refereed post-conference proceedings of the Third IFIP WG 13.6 Working Conference on Human Work Interaction Design, HWID 2012, held in Copenhagen, Denmark, in December 2012. The 16 revised papers presented were carefully selected for inclusion in this volume. The papers reflect many different areas and address many complex and diverse work domains, ranging from medical user [...]

Contents

Work analysis: dimensions and methods.- Interactions, models and approaches.- Evaluations, interactions and applications.

Fields of interest

User Interfaces and Human Computer Interaction; Computers and Society; Computer Applications

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41144-1

Hardcover

2013. VIII, 199 p. 76 illus. (IFIP Advances in Information and Communication Technology, Vol. 407)

\$109.00

ISBN 978-3-642-41144-1

Due: September 30, 2013

J.-S. Pan, National Kaohsiung University of Applied, Kaohsiung, Taiwan; M.M. Polycarpou, University of Cyprus, Nicosia, Cyprus; M. Wozniak, Wrocław University of Technology, Wrocław, Poland; A.C.P.L.F. de Carvalho, H. Quintian (Eds.)

Hybrid Artificial Intelligent Systems

8th International Conference, HAIS 2013, Salamanca, Spain, September 11-13, 2013. Proceedings

This volume constitutes the proceedings of the 8th International Conference on Hybrid Artificial Intelligent Systems, HAIS 2013, held in Salamanca, Spain, in September 2013. The 68 papers published in this volume were carefully reviewed and selected from 218 submissions. They are organized in topical sessions on Agents and Multi Agents Systems; HAIS Applications; Classification and Cluster Analysis; Data Mining and Knowledge Discovery; Video and Image Analysis; Bio-inspired Models and Evolutionary Computation; Learning Algorithms; Systems, MAN, and Cybernetics; Hybrid Intelligent Systems for Data Mining and Applications; Metaheuristics for Combinatorial Optimization and Modelling[...]

Features

This volume constitutes the proceedings of the 8th International Conference on Hybrid Artificial Intelligent Systems, HAIS 2013, held in Salamanca, Spain, in September 2013. The 68 papers published in this volume were carefully reviewed and selected from 218 submissions. They are organized in topical sessions on Agents and Multi Agents Systems; HAIS Applications; Classification and Cluster Analysis; Data [...]

Contents

Agents and Multi Agents Systems.- HAIS Applications.- Classification and Cluster Analysis.- Data Mining and Knowledge Discovery.- Video and Image Analysis.- Bio-inspired Models and Evolutionary Computation.- Learning Algorithms.- Systems, MAN, and Cybernetics.- Hybrid Intelligent Systems for Data Mining and Applications.- Metaheuristics for Combinatorial Optimization and Modelling Complex Systems.

Fields of interest

Artificial Intelligence (incl. Robotics); Algorithm Analysis and Problem Complexity; Information Systems Applications (incl. Internet); Computation by Abstract Devices; Database Management; Information Storage and Retrieval

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40845-8

Softcover

2013. XX, 691 p. 228 illus. (Lecture Notes in Artificial Intelligence, Vol. 8073)

\$131.00

ISBN 978-3-642-40845-8

usually dispatched within 3 to 5 business days

P. Forner, CELCT, Povo, Italy; H. Müller, R. Paredes, Universitat Politècnica de València, Valencia, Spain; P. Rosso, Universitat Politècnica de València, Valencia, Spain; B. Stein, Bauhaus-Universität, Weimar, Germany (Eds.)

Information Access Evaluation. Multilinguality, Multimodality, and Visualization

4th International Conference of the CLEF Initiative, CLEF 2013, Valencia, Spain, September 23-26, 2013. Proceedings

This book constitutes the refereed proceedings of the 4th International Conference of the CLEF Initiative, CLEF 2013, held in Valencia, Spain, in September 2013. The 32 papers and 2 keynotes presented were carefully reviewed and selected for inclusion in this volume. The papers are organized in topical sections named: evaluation and visualization; multilinguality and less-resourced languages; applications; and Lab overviews.

Features

This book constitutes the refereed proceedings of the 4th International Conference of the CLEF Initiative, CLEF 2013, held in Valencia, Spain, in September 2013. The 32 papers and 2 keynotes presented were carefully reviewed and selected for inclusion in this volume. The papers are organized in topical sections named: evaluation and visualization; multilinguality and less-resourced languages; applications; and [...]

Contents

Evaluation and visualization.- Multilinguality and less-resourced languages.- Applications.- Lab overviews.

Fields of interest

Language Translation and Linguistics; Artificial Intelligence (incl. Robotics); Information Storage and Retrieval; Information Systems Applications (incl. Internet); User Interfaces and Human Computer Interaction; Computational Linguistics

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40801-4

Softcover

2013. XVIII, 370 p. 69 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8138)

\$83.00

ISBN 978-3-642-40801-4

usually dispatched within 3 to 5 business days

H. Yin, University of Manchester, Manchester, United Kingdom; K. Tang, Y. Gao, Nanjing University, Nanjing, China (P.R.); F. Klawonn, Ostfalia University of Applied Sciences, Wolfenbüttel, Germany; M. Lee, Kyungpook National University, Buk-Gu Daegu, Korea, Republic of (South Korea); B. Li, University of Science and Technology, Hefei, China (P.R.); Th. Weise, University of Science and Technology, Hefei, China (P.R.); X. Yao, University of Birmingham, Birmingham, United Kingdom (Eds.)

Intelligent Data Engineering and Automated Learning -- IDEAL 2013

14th International Conference, IDEAL 2013, Hefei, China, October 20-23, 2013. Proceedings

This book constitutes the refereed proceedings of the 14th International Conference on Intelligent Data Engineering and Automated Learning, IDEAL 2013, held in Hefei, China, in October 2013. The 76 revised full papers presented were carefully reviewed and selected from more than 130 submissions. These papers provided a valuable collection of latest research outcomes in data engineering and automated learning, from methodologies, frameworks and techniques to applications. In addition to various topics such as evolutionary algorithms, neural networks, probabilistic modelling, swarm intelligent, multi-objective optimisation, and practical applications in regression, classification, [...]

Features

This book constitutes the refereed proceedings of the 14th International Conference on Intelligent Data Engineering and Automated Learning, IDEAL 2013, held in Hefei, China, in October 2013. The 76 revised full papers presented were carefully reviewed and selected from more than 130 submissions. These papers provided a valuable collection of latest research outcomes in data engineering and automated [...]

Contents

A Pruning Algorithm for Extreme Learning Machine.- Measuring Stability and Discrimination Power of Metrics in Information Retrieval Evaluation.- System for Monitoring and Optimization of Micro- and Nano-Machining Processes Using Intelligent Voice and Visual Communication.- Racing for Unbalanced Methods Selection.- Super-Resolution from One Single Low-Resolution Image Based on R-KSVD and Example-Based Algorithm.- Bilateral Multi-issue Parallel Negotiation Model Based on Reinforcement Learning.- Learning to Detect the Subway Station Arrival for Mobile Users.- Vision Based Multi-pedestrian [...]

Fields of interest

Data Mining and Knowledge Discovery; Pattern Recognition; Artificial Intelligence (incl. Robotics); Algorithm Analysis and Problem Complexity; Information Storage and Retrieval; Computation by Abstract Devices

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41277-6

Softcover

2013. XVIII, 639 p. 215 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8206)

\$119.00

ISBN 978-3-642-41277-6

usually dispatched within 3 to 5 business days

J. Lee, Pusan National University, Pusan, Korea, Republic of (South Korea); M.C. Lee, Pusan National University, Busan, Korea, Republic of (South Korea); H. Liu, University of Portsmouth, Portsmouth, United Kingdom; J.-H. Ryu (Eds.)

Intelligent Robotics and Applications

6th International Conference, ICIRA 2013, Busan, South Korea, September 25-28, 2013, Proceedings, Part I

This two volume set LNAI 8102 and LNAI 8103 constitutes the refereed proceedings of the 6th International Conference on Intelligent Robotics and Applications, ICIRA 2013, held in Busan, South Korea, in September 2013. The 147 revised full papers presented were carefully reviewed and selected from 184 submissions. The papers discuss various topics from intelligent robotics, automation and mechatronics with particular emphasis on technical challenges associated with varied applications such as biomedical application, industrial automation, surveillance and sustainable mobility.

Features

This two volume set LNAI 8102 and LNAI 8103 constitutes the refereed proceedings of the 6th International Conference on Intelligent Robotics and Applications, ICIRA 2013, held in Busan, South Korea, in September 2013. The 147 revised full papers presented were carefully reviewed and selected from 184 submissions. The papers discuss various topics from intelligent robotics, automation and mechatronics with [...]

Contents

intelligent robotics, automation and mechatronics with particular emphasis on technical challenges associated with varied applications such as biomedical application, industrial automation, surveillance and sustainable mobility.

Fields of interest

Artificial Intelligence (incl. Robotics); Pattern Recognition; Image Processing and Computer Vision; Computers and Society; Computer Applications; Special Purpose and Application-Based Systems

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40851-9

Softcover

2013. XXVIII, 755 p. 513 illus. (Lecture Notes in Artificial Intelligence, Vol. 8102)

\$131.00

ISBN 978-3-642-40851-9

usually dispatched within 3 to 5 business days

J. Lee, Pusan National University, Pusan, Korea, Republic of (South Korea); M.C. Lee, Pusan National University, Busan, Korea, Republic of (South Korea); H. Liu, J.-H. Ryu (Eds.)

Intelligent Robotics and Applications

6th International Conference, ICIRA 2013, Busan, South Korea, September 25-28, 2013, Proceedings, Part II

This two volume set LNAI 8102 and LNAI 8103 constitutes the refereed proceedings of the 6th International Conference on Intelligent Robotics and Applications, ICIRA 2013, held in Busan, South Korea, in September 2013. The 147 revised full papers presented were carefully reviewed and selected from 184 submissions. The papers discuss various topics from intelligent robotics, automation and mechatronics with particular emphasis on technical challenges associated with varied applications such as biomedical application, industrial automation, surveillance and sustainable mobility.

Features

This two volume set LNAI 8102 and LNAI 8103 constitutes the refereed proceedings of the 6th International Conference on Intelligent Robotics and Applications, ICIRA 2013, held in Busan, South Korea, in September 2013. The 147 revised full papers presented were carefully reviewed and selected from 184 submissions. The papers discuss various topics from intelligent robotics, automation and mechatronics with [...]

Contents

The papers discuss various topics from intelligent robotics, automation and mechatronics with particular emphasis on technical challenges associated with varied applications such as biomedical application, industrial automation, surveillance and sustainable mobility.

Fields of interest

Artificial Intelligence (incl. Robotics); Pattern Recognition; Image Processing and Computer Vision; Computers and Society; Computer Applications; Special Purpose and Application-Based Systems

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40848-9

Softcover

2013. XXVIII, 743 p. 517 illus. (Lecture Notes in Artificial Intelligence, Vol. 8103)

\$131.00

ISBN 978-3-642-40848-9

usually dispatched within 3 to 5 business days

I.J. Timm, Universität Trier, Trier, Germany; M. Thimm, University of Koblenz-Landau, Koblenz, Germany (Eds.)

KI 2013: Advances in Artificial Intelligence

36th Annual German Conference on AI, Koblenz, Germany, September 16-20, 2013, Proceedings

This book constitutes the refereed proceedings of the 35th Annual German Conference on Artificial Intelligence, KI 2013, held in Koblenz, Germany, in September 2013. The 24 revised full papers presented together with 8 short papers were carefully reviewed and selected from 70 submissions. The papers contain research results on theory and applications of all aspects of AI.

Features

This book constitutes the refereed proceedings of the 35th Annual German Conference on Artificial Intelligence, KI 2013, held in Koblenz, Germany, in September 2013. The 24 revised full papers presented together with 8 short papers were carefully reviewed and selected from 70 submissions. The papers contain research results on theory and applications of all aspects of AI.

Contents

Using State-Based Planning Heuristics for Partial-Order Causal-Link.- Planning.- Workflow Clustering Using Semantic Similarity Measures.- Empathy and Its Modulation in a Virtual Human.- Cognitive Workload of Humans Using Artificial Intelligence Systems: Towards Objective Measurement Applying Eye-Tracking Technology.

Fields of interest

Artificial Intelligence (incl. Robotics); Information Storage and Retrieval; Simulation and Modeling; User Interfaces and Human Computer Interaction; Mathematical Logic and Formal Languages

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40941-7

Softcover

2013. XX, 313 p. 102 illus. (Lecture Notes in Artificial Intelligence, Vol. 8077)

\$83.00

ISBN 978-3-642-40941-7

usually dispatched within 3 to 5 business days

P. Klinov, University of Ulm, Ulm, Germany; D. Mourontsev, University of Information Technologies, St. Petersburg, Russian Federation (Eds.)

Knowledge Engineering and the Semantic Web

4th Conference, KESW 2013, St. Petersburg, Russia, October 7-9, 2013. Proceedings

This book constitutes the refereed proceedings of the 4th Conference on Knowledge Engineering and the Semantic Web, KESW 2013, held in St. Petersburg, Russia, in October 2013. The 18 revised full papers presented together with 7 short system descriptions were carefully reviewed and selected from 52 submissions. The papers address research issues related to knowledge representation, semantic web, and linked data.

Features

This book constitutes the refereed proceedings of the 4th Conference on Knowledge Engineering and the Semantic Web, KESW 2013, held in St. Petersburg, Russia, in October 2013. The 18 revised full papers presented together with 7 short system descriptions were carefully reviewed and selected from 52 submissions. The papers address research issues related to knowledge representation, semantic web, and linked data.

Contents

Knowledge representation.- Semantic Web.- Linked data.

Fields of interest

Information Storage and Retrieval; Artificial Intelligence (incl. Robotics); Database Management; User Interfaces and Human Computer Interaction

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41359-9

Softcover

2013. XIV, 299 p. 105 illus. (Communications in Computer and Information Science, Vol. 394)

\$95.00

ISBN 978-3-642-41359-9

usually dispatched within 3 to 5 business days

P. Mehta

Learn OpenGL ES

For Mobile Game and Graphics Development

Want to create sophisticated games and graphics-intensive apps? Learn OpenGL ES gets you started immediately with OpenGL ES. After mastering the basics of OpenGL ES itself, you will quickly find yourself writing and building game apps, without having to learn about object oriented programming techniques. This book demonstrates the use of a powerful open-source modeling tool, Blender. You will be guided, step by step, through the development of Tank Fence, a dynamic, interactive 3D game. Along the way you'll gain skills in building apps with Eclipse and the Android SDK or NDK, rendering graphics using hardware acceleration, and multithreading for performance and responsiveness. [...]

Features

Want to create sophisticated games and graphics-intensive apps? Learn OpenGL ES gets you started immediately with OpenGL ES. After mastering the basics of OpenGL ES itself, you will quickly find yourself writing and building game apps, without having to learn about object oriented programming techniques. This book demonstrates the use of a powerful open-source modeling tool, [...]

Fields of interest

Computer Science (general)

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-5053-1

Softcover

2013. 220 p.

\$39.99

ISBN 978-1-4302-5053-1

usually dispatched within 3 to 5 business days

D. Grossi, O. Roy, H. Huang (Eds.)

Logic, Rationality, and Interaction

4th International Workshop, LORI 2013, Hangzhou, China, October 9-12, 2013. Proceedings

This book collects the papers presented at the 4th International Workshop on Logic, Rationality and Interaction/ (LORI-4), held in October 2013 at the / Center for the Study of Language and Cognition, Zhejiang University, Hangzhou, China. LORI is a series that brings together researchers from a variety of logic-related fields: Game and Decision Theory, Philosophy, Linguistics, Computer Science and AI. This year had a special emphasis on Norms and Argumentation. Out of 42 submissions, 23 full papers and 11 short contributions have been selected through peer-review for inclusion in the workshop program and in this volume. The quality and diversity of these contributions witnesses a [...]

Features

This book collects the papers presented at the 4th International Workshop on Logic, Rationality and Interaction/ (LORI-4), held in October 2013 at the / Center for the Study of Language and Cognition, Zhejiang University, Hangzhou, China. LORI is a series that brings together researchers from a variety of logic-related fields: Game and Decision Theory, Philosophy, Linguistics, Computer Science and AI. This [...]

Contents

Full Papers.- Boolean Games with Epistemic Goals.- Minimal Preference Change.- The Topology of Belief, Belief Revision and Defeasible Knowledge.- Plan Recognition, Indefinites, and the Semantics-Pragmatics Boundary.- A Semantic Model for Interrogatives Based on Generalized Quantifiers and Bilattices.- A Two-Tiered Formalization of Social Influence.- A Unified Epistemic Analysis of Iterated Elimination Algorithms from Regret Viewpoint.- Listen to Me! Public Announcements to Agents That Pay Attention — or Not.- An Offer You Cannot Refuse: Obtaining Efficiency and Fairness in Pre-play[...]

Fields of interest

Mathematical Logic and Formal Languages; Mathematical Logic and Foundations; Discrete Mathematics in Computer Science; Symbolic and Algebraic Manipulation; Logics and Meanings of Programs; Theory of Computation

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40947-9

Softcover

2013. XII, 363 p. 41 illus. (Theoretical Computer Science and General Issues, Vol. 8196)

\$83.00

ISBN 978-3-642-40947-9

usually dispatched within 3 to 5 business days

H. Blockeel, KU Leuven, Leuven, Belgium; K. Kersting, University of Bonn, Sankt Augustin, Germany; S. Nijssen, Universiteit Leiden, Leiden, Netherlands; F. Železný, Czech Technical University in Prague, Prague 6, Czech Republic (Eds.)

Machine Learning and Knowledge Discovery in Databases

European Conference, ECML PKDD 2013, Prague, Czech Republic, September 23-27, 2013, Proceedings, Part I

This three-volume set LNAI 8188, 8189 and 8190 constitutes the refereed proceedings of the European Conference on Machine Learning and Knowledge Discovery in Databases, ECML PKDD 2013, held in Prague, Czech Republic, in September 2013. The 111 revised research papers presented together with 5 invited talks were carefully reviewed and selected from 447 submissions. The papers are organized in topical sections on reinforcement learning; Markov decision processes; active learning and optimization; learning from sequences; time series and spatio-temporal data; data streams; graphs and networks; social network analysis; natural language processing and information extraction; ranking and[...]

Features

This three-volume set LNAI 8188, 8189 and 8190 constitutes the refereed proceedings of the European Conference on Machine Learning and Knowledge Discovery in Databases, ECML PKDD 2013, held in Prague, Czech Republic, in September 2013. The 111 revised research papers presented together with 5 invited talks were carefully reviewed and selected from 447 submissions. The papers are organized in topical sections [...]

Contents

Reinforcement learning.- Markov decision processes.- Active learning and optimization.- Learning from sequences.- Time series and spatio-temporal data.- Data streams.- Graphs and networks.- Social network analysis.- Natural language processing and information extraction.- Ranking and recommender systems.- Matrix and tensor analysis.- Structured output prediction, multi-label and multi-task learning.- Transfer learning.- Bayesian learning.- Graphical models.- Nearest-neighbor methods.- Ensembles.- Statistical learning.- Semi-supervised learning.- Unsupervised learning.- Subgroup[...]

Fields of interest

Data Mining and Knowledge Discovery; Artificial Intelligence (incl. Robotics); Pattern Recognition; Discrete Mathematics in Computer Science; Probability and Statistics in Computer Science; Information Storage and Retrieval

Target groups
Research

Type of publication
Proceedings

More on www.springer.com/978-3-642-40987-5

Softcover

2013. LIV, 691 p. 198 illus. (Lecture Notes in Artificial Intelligence, Vol. 8188)

\$131.00

ISBN 978-3-642-40987-5

usually dispatched within 3 to 5 business days

H. Blockeel, KU Leuven, Leuven, Belgium; K. Kersting, University of Bonn, Sankt Augustin, Germany; S. Nijssen, Universiteit Leiden, Leiden, Netherlands; F. Železný, Czech Technical University in Prague, Prague 6, Czech Republic (Eds.)

Machine Learning and Knowledge Discovery in Databases

European Conference, ECML PKDD 2013, Prague, Czech Republic, September 23-27, 2013, Proceedings, Part II

This three-volume set LNAI 8188, 8189 and 8190 constitutes the refereed proceedings of the European Conference on Machine Learning and Knowledge Discovery in Databases, ECML PKDD 2013, held in Prague, Czech Republic, in September 2013. The 111 revised research papers presented together with 5 invited talks were carefully reviewed and selected from 447 submissions. The papers are organized in topical sections on reinforcement learning; Markov decision processes; active learning and optimization; learning from sequences; time series and spatio-temporal data; data streams; graphs and networks; social network analysis; natural language processing and information extraction; ranking and[...]

Features

This three-volume set LNAI 8188, 8189 and 8190 constitutes the refereed proceedings of the European Conference on Machine Learning and Knowledge Discovery in Databases, ECML PKDD 2013, held in Prague, Czech Republic, in September 2013. The 111 revised research papers presented together with 5 invited talks were carefully reviewed and selected from 447 submissions. The papers are organized in topical sections [...]

Contents

Reinforcement learning.- Markov decision processes.- Active learning and optimization.- Learning from sequences.- Time series and spatio-temporal data.- Data streams.- Graphs and networks.- Social network analysis.- Natural language processing and information extraction.- Ranking and recommender systems.- Matrix and tensor analysis.- Structured output prediction, multi-label and multi-task learning.- Transfer learning.- Bayesian learning.- Graphical models.- Nearest-neighbor methods.- Ensembles.- Statistical learning.- Semi-supervised learning.- Unsupervised learning.- Subgroup[...]

Fields of interest

Data Mining and Knowledge Discovery; Artificial Intelligence (incl. Robotics); Pattern Recognition; Discrete Mathematics in Computer Science; Probability and Statistics in Computer Science; Information Storage and Retrieval

Target groups
Research

Type of publication
Proceedings

More on www.springer.com/978-3-642-40990-5

Softcover

2013. XLIV, 693 p. 160 illus. (Lecture Notes in Artificial Intelligence, Vol. 8189)

\$131.00

ISBN 978-3-642-40990-5

usually dispatched within 3 to 5 business days

H. Blockeel, KU Leuven, Leuven, Belgium; K. Kersting, University of Bonn, Sankt Augustin, Germany; S. Nijssen, Universiteit Leiden, Leiden, Netherlands; F. Železný, Czech Technical University in Prague, Prague 6, Czech Republic (Eds.)

Machine Learning and Knowledge Discovery in Databases

European Conference, ECML PKDD 2013, Prague, Czech Republic, September 23-27, 2013, Proceedings, Part III

This three-volume set LNAI 8188, 8189 and 8190 constitutes the refereed proceedings of the European Conference on Machine Learning and Knowledge Discovery in Databases, ECML PKDD 2013, held in Prague, Czech Republic, in September 2013. The 111 revised research papers presented together with 5 invited talks were carefully reviewed and selected from 447 submissions. The papers are organized in topical sections on reinforcement learning; Markov decision processes; active learning and optimization; learning from sequences; time series and spatio-temporal data; data streams; graphs and networks; social network analysis; natural language processing and information extraction; ranking and[...]

Features

This three-volume set LNAI 8188, 8189 and 8190 constitutes the refereed proceedings of the European Conference on Machine Learning and Knowledge Discovery in Databases, ECML PKDD 2013, held in Prague, Czech Republic, in September 2013. The 111 revised research papers presented together with 5 invited talks were carefully reviewed and selected from 447 submissions. The papers are organized in topical sections [...]

Contents

Reinforcement learning.- Markov decision processes.- Active learning and optimization.- Learning from sequences.- Time series and spatio-temporal data.- Data streams.- Graphs and networks.- Social network analysis.- Natural language processing and information extraction.- Ranking and recommender systems.- Matrix and tensor analysis.- Structured output prediction, multi-label and multi-task learning.- Transfer learning.- Bayesian learning.- Graphical models.- Nearest-neighbor methods.- Ensembles.- Statistical learning.- Semi-supervised learning.- Unsupervised learning.- Subgroup[...]

Fields of interest

Data Mining and Knowledge Discovery; Artificial Intelligence (incl. Robotics); Pattern Recognition; Discrete Mathematics in Computer Science; Probability and Statistics in Computer Science; Information Storage and Retrieval

Target groups
Research

Type of publication
Proceedings

More on www.springer.com/978-3-642-40993-6

Softcover

2013. XLVI, 689 p. 190 illus. (Lecture Notes in Artificial Intelligence, Vol. 8190)

\$131.00

ISBN 978-3-642-40993-6

usually dispatched within 3 to 5 business days

S. Osborn

Makers at Work

Folks Reinventing the World One Object or Idea at a Time

What do you get when you combine an electronics hobbyist, hacker, garage mechanic, kitchen table inventor, tinkerer, and entrepreneur? A #maker, # of course. Playful and creative, makers are #through expertise and experimentation #creating art, products, and processes that change the way we think and interact with the world. As you #ll see from the 21 interviews in *Makers at Work*, inquisitive makers are just as apt to pick up a laser cutter or an Arduino as a wrench to fashion something new. For example, you #ll meet Jeri Ellsworth, who might provide a video lecture on magnetic logic one day and a tutorial on welding a roll bar on a stock car the next. You #ll also meet Eben Upton, [...]

Features

What do you get when you combine an electronics hobbyist, hacker, garage mechanic, kitchen table inventor, tinkerer, and entrepreneur? A #maker, # of course. Playful and creative, makers are #through expertise and experimentation #creating art, products, and processes that change the way we think and interact with the world. As you #ll see from the 21 interviews in [...]

Fields of interest

Computer Science (general); The Computer Industry

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-5992-3

Softcover

2013. 324 p.

\$29.99

ISBN 978-1-4302-5992-3

usually dispatched within 3 to 5 business days

L. Fàbrega, Universitat de Girona, Girona, Spain; P. Vilà, Universitat de Girona, Girona, Spain; D. Careglio, Universitat Politècnica de Catalunya, Barcelona, Spain; D. Papadimitriou (Eds.)

Measurement Methodology and Tools

First European Workshop, FP7 FIRE/EULER Project, May 9, 2012, Aalborg, Denmark, Invited Papers

This book constitutes the outcome of the Workshop on Measurement and Measurement Tools which was held as part of the Future Internet Research Experimentation (FIRE) initiative during the Future Internet Assembly conference (FIA) in May 2012. The 10 contributions included in this volume are invited extended versions of the presentations at the workshop. The book closes with a summary and conclusions of the findings in these papers.

Features

This book constitutes the outcome of the Workshop on Measurement and Measurement Tools which was held as part of the Future Internet Research Experimentation (FIRE) initiative during the Future Internet Assembly conference (FIA) in May 2012. The 10 contributions included in this volume are invited extended versions of the presentations at the workshop. The book closes with a summary and conclusions of the [...]

Contents

Introduction.- Measurement-Based Experimental Research Methodology.- Experimental Performance Evaluation of Sensor-Based Networking for Energy Efficiency in Smart Buildings.- Various Detection Techniques and Platforms for Monitoring Interference Condition in a Wireless Testbed.- Methodology and Tools for Measurements on Wireless Test beds: The NITOS Approach.- Scalability Measurements in an Information-Centric Network.- Iterative Research Method Applied to the Design and Evaluation of a Dynamic Multicast Routing Scheme.- Metrics and Measurement Tools in Open Flow and the OFELIA Test [...]

Fields of interest

Computer Communication Networks; Information Systems Applications (incl. Internet); Software Engineering; Management of Computing and Information Systems; Multimedia Information Systems; Information Storage and Retrieval

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41295-0

Softcover

2013. VIII, 205 p. 96 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 7586)

\$72.00

ISBN 978-3-642-41295-0

usually dispatched within 3 to 5 business days

K. Mori, I. Sakuma, University of Tokyo, Tokyo, Japan; Y. Sato, Osaka University, Osaka, Japan; C. Barillot, IRISA, Rennes, France; N. Navab, Technische Universität München, Garching, Germany (Eds.)

Medical Image Computing and Computer-Assisted Intervention -- MICCAI 2013

16th International Conference, Nagoya, Japan, September 22-26, 2013, Proceedings, Part I

The three-volume set LNCS 8149, 8150, and 8151 constitutes the refereed proceedings of the 16th International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2013, held in Nagoya, Japan, in September 2013. Based on rigorous peer reviews, the program committee carefully selected 262 revised papers from 789 submissions for presentation in three volumes. The 95 papers included in the first volume have been organized in the following topical sections: physiological modeling and computer-assisted intervention; imaging, reconstruction, and enhancement; registration; machine learning, statistical modeling, and atlases; computer-aided diagnosis and imaging [...]

Features

The three-volume set LNCS 8149, 8150, and 8151 constitutes the refereed proceedings of the 16th International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2013, held in Nagoya, Japan, in September 2013. Based on rigorous peer reviews, the program committee carefully selected 262 revised papers from 789 submissions for presentation in three volumes. The 95 papers included in [...]

Contents

Physiological modeling and computer-assisted intervention.- Imaging, reconstruction, and enhancement.- Registration.- Machine learning, statistical modeling, and atlases.- Computer-aided diagnosis and imaging biomarkers.- Intraoperative guidance and robotics.- Microscope, optical imaging, and histology.- Cardiology, vasculatures and tubular structures.- Brain imaging and basic techniques.- Diffusion MRI.- Brain segmentation and atlases.

Fields of interest

Image Processing and Computer Vision; Pattern Recognition; Computer Graphics; Artificial Intelligence (incl. Robotics); Imaging / Radiology; Health Informatics

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40810-6

Softcover

2013. LX, 780 p. 331 illus. (Image Processing, Computer Vision, Pattern Recognition, and Graphics, Vol. 8149)

\$143.00

ISBN 978-3-642-40810-6

usually dispatched within 3 to 5 business days

K. Mori, I. Sakuma, University of Tokyo, Tokyo, Japan; Y. Sato, Osaka University, Osaka, Japan; C. Barillot, IRISA, Rennes, France; N. Navab, Technische Universität München, Garching, Germany (Eds.)

Medical Image Computing and Computer-Assisted Intervention -- MICCAI 2013

16th International Conference, Nagoya, Japan, September 22-26, 2013, Proceedings, Part II

The three-volume set LNCS 8149, 8150, and 8151 constitutes the refereed proceedings of the 16th International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2013, held in Nagoya, Japan, in September 2013. Based on rigorous peer reviews, the program committee carefully selected 262 revised papers from 789 submissions for presentation in three volumes. The 86 papers included in the second volume have been organized in the following topical sections: registration and atlas construction; microscopy, histology, and computer-aided diagnosis; motion modeling and compensation; segmentation; machine learning, statistical modeling, and atlases; computer-aided[...]

Features

The three-volume set LNCS 8149, 8150, and 8151 constitutes the refereed proceedings of the 16th International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2013, held in Nagoya, Japan, in September 2013. Based on rigorous peer reviews, the program committee carefully selected 262 revised papers from 789 submissions for presentation in three volumes. The 86 papers included in [...]

Contents

Registration and atlas construction.- Microscopy, histology, and computer-aided diagnosis.- Motion modeling and compensation.- Segmentation.- Machine learning, statistical modeling, and atlases.- Computer-aided diagnosis and imaging biomarkers.- Physiological modeling, simulation, and planning.- Microscope, optical imaging, and histology.- Cardiology.- Vascularities and tubular structures.- Brain segmentation and atlases.- Functional MRI and neuroscience applications.

Fields of interest

Image Processing and Computer Vision; Pattern Recognition; Computer Graphics; Artificial Intelligence (incl. Robotics); Imaging / Radiology; Health Informatics

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40762-8

Softcover

2013. XXXVIII, 718 p. 306 illus. (Image Processing, Computer Vision, Pattern Recognition, and Graphics, Vol. 8150)

\$131.00

ISBN 978-3-642-40762-8

usually dispatched within 3 to 5 business days

K. Mori, I. Sakuma, University of Tokyo, Tokyo, Japan; Y. Sato, Osaka University, Osaka, Japan; C. Barillot, IRISA, Rennes, France; N. Navab, Technische Universität München, Garching, Germany (Eds.)

Medical Image Computing and Computer-Assisted Intervention -- MICCAI 2013

16th International Conference, Nagoya, Japan, September 22-26, 2013, Proceedings, Part III

The three-volume set LNCS 8149, 8150, and 8151 constitutes the refereed proceedings of the 16th International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2013, held in Nagoya, Japan, in September 2013. Based on rigorous peer reviews, the program committee carefully selected 262 revised papers from 789 submissions for presentation in three volumes. The 81 papers included in the third volume have been organized in the following topical sections: image reconstruction and motion modeling; machine learning in medical image computing; imaging, reconstruction, and enhancement; segmentation; physiological modeling, simulation, and planning; intraoperative[...]

Features

The three-volume set LNCS 8149, 8150, and 8151 constitutes the refereed proceedings of the 16th International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2013, held in Nagoya, Japan, in September 2013. Based on rigorous peer reviews, the program committee carefully selected 262 revised papers from 789 submissions for presentation in three volumes. The 81 papers included in [...]

Contents

Image reconstruction and motion modeling.- Machine learning in medical image computing.- Imaging, reconstruction, and enhancement.- Segmentation.- Physiological modeling, simulation, and planning.- Intraoperative guidance and robotics.- Microscope, optical imaging, and histology.- Diffusion MRI.- Brain segmentation and atlases.- Functional MRI and neuroscience applications.

Fields of interest

Image Processing and Computer Vision; Pattern Recognition; Computer Graphics; Artificial Intelligence (incl. Robotics); Imaging / Radiology; Health Informatics

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40759-8

Softcover

2013. XXXVIII, 672 p. 291 illus. (Image Processing, Computer Vision, Pattern Recognition, and Graphics, Vol. 8151)

\$131.00

ISBN 978-3-642-40759-8

usually dispatched within 3 to 5 business days

A. Cuzzocrea, University of Calabria, Rende, Italy; S. Maabout, University of Bordeaux, Talence, France (Eds.)

Model and Data Engineering

Third International Conference, MEDI 2013, Amantea, Italy, September 25-27, 2013 Proceedings

This book constitutes the refereed proceedings of the Third International Conference on Model and Data Engineering, MEDI 2013, held in Amantea, Calabria, Italy, in September 2013. The 19 long papers and 3 short papers presented were carefully reviewed and selected from 61 submissions. The papers specifically focus on model engineering and data engineering with special emphasis on most recent and relevant topics in the areas of model-driven engineering, ontology engineering, formal modeling, security, and database modeling.

Features

This book constitutes the refereed proceedings of the Third International Conference on Model and Data Engineering, MEDI 2013, held in Amantea, Calabria, Italy, in September 2013. The 19 long papers and 3 short papers presented were carefully reviewed and selected from 61 submissions. The papers specifically focus on model engineering and data engineering with special emphasis on most recent and relevant [...]

Contents

model-driven engineering.- ontology engineering.- formal modeling.- security.- database modeling.

Fields of interest

Software Engineering; Database Management; Simulation and Modeling; Management of Computing and Information Systems

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41365-0

Softcover

2013. XII, 291 p. 109 illus. (Programming and Software Engineering, Vol. 8216)

\$83.00

ISBN 978-3-642-41365-0

usually dispatched within 3 to 5 business days

A. Moreira, Universidade Nova de Lisboa, Caparica, Portugal; B. Schätz, Technische Universität München, Garching, Germany; J. Gray, University of Alabama, Tuscaloosa, USA; A. Vallecillo, Universidad de Malaga, Malaga, Spain; P. Clarke (Eds.)

Model-Driven Engineering Languages and Systems

16th International Conference, MODELS 2013, Miami, FL, USA, September 29 – October 4, 2013. Proceedings

This book constitutes the refereed proceedings of the 16th International Conference on Model Driven Engineering Languages and Systems, MODELS 2013, held in Miami, FL, USA, in September/October 2013. The 47 full papers presented in this volume were carefully reviewed and selected from a total of 180 submissions. They are organized in topical sections named: tool support; dependability; comprehensibility; testing; evolution; verification; product lines; semantics; domain-specific modeling languages; models@RT; design and architecture; model transformation; model analysis; and system synthesis.

Features

This book constitutes the refereed proceedings of the 16th International Conference on Model Driven Engineering Languages and Systems, MODELS 2013, held in Miami, FL, USA, in September/October 2013. The 47 full papers presented in this volume were carefully reviewed and selected from a total of 180 submissions. They are organized in topical sections named: tool support; dependability; comprehensibility; [...]

Contents

Tool support.- Dependability.- Comprehensibility.- Testing.- Evolution.- Verification.- Product lines.- Semantics.- Domain-specific modeling languages.- Design and architecture.- Model transformation.- Model analysis.- System synthesis.

Fields of interest

Programming Languages, Compilers, Interpreters; Software Engineering; Logics and Meanings of Programs; Management of Computing and Information Systems; Simulation and Modeling; System Performance and Evaluation

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41532-6

Softcover

2013. XXVIII, 792 p. 299 illus. (Programming and Software Engineering, Vol. 8107)

\$143.00

ISBN 978-3-642-41532-6

usually dispatched within 3 to 5 business days

P. Brézillon, University Pierre and Marie Curie (UPMC), Paris, France; P. Blackburn, University of Roskilde, Roskilde, Denmark; R. Dapoigny, University of Savoie, Annecy le Vieux Cedex, France (Eds.)

Modeling and Using Context

8th International and Interdisciplinary Conference, CONTEXT 2013, Annecy, France, October 28 - 31, 2013. Proceedings

This book constitutes the proceedings of the 8th International and Interdisciplinary Conference on Modeling and Using Context, CONTEXT 2013, held in Annecy, France, in October/November 2013. The 23 full papers and 9 short papers presented were carefully reviewed and selected from numerous submissions. In addition the book contains two keynote speeches and 9 poster papers. They cover cutting-edge results from the wide range of disciplines concerned with context, including: Cognitive Sciences (Linguistics, Psychology, Computer Science, Neuroscience), and computer science (artificial intelligence, logics, ubiquitous and pervasive computing, context-awareness systems), and the Social[...]

Features

This book constitutes the proceedings of the 8th International and Interdisciplinary Conference on Modeling and Using Context, CONTEXT 2013, held in Annecy, France, in October/November 2013. The 23 full papers and 9 short papers presented were carefully reviewed and selected from numerous submissions. In addition the book contains two keynote speeches and 9 poster papers. They cover cutting-edge results [...]

Contents

Context and meaning.- A Typed Approach for Contextualizing the Part-whole Relation.- Interpreting Vague and Ambiguous Referring Expressions by Dynamically Binding to Properties of the Context Set.- Evaluation of a refinement algorithm for the generation of referring expressions.- Context in context.- Looking for a Synergy Between Human and Artificial Cognition.- The Role of Context in Practice based Organizational Learning and Performance Improvement.- DCCLA: Automatic Indoor Localization using Unsupervised WiFi Fingerprinting.- Contextual methodologies.- Context based development of[...]

Fields of interest

Artificial Intelligence (incl. Robotics); Mathematical Logic and Formal Languages; Information Systems Applications (incl. Internet); Computer Appl. in Social and Behavioral Sciences; Computer Appl. in Arts and Humanities; Computers and Society

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40971-4

Softcover

2013. XII, 381 p. 110 illus. (Lecture Notes in Artificial Intelligence, Vol. 8175)

\$83.00

ISBN 978-3-642-40971-4

usually dispatched within 3 to 5 business days

C. Chauve, Simon Fraser University, Burnaby, Canada; N. El-Mabrouk, E. Tannier (Eds.)

Models and Algorithms for Genome Evolution

This authoritative text/reference presents a review of the history, current status, and potential future directions of computational biology in molecular evolution. Gathering together the unique insights of an international selection of prestigious researchers, this must-read volume examines the latest developments in the field, the challenges that remain, and the new avenues emerging from the growing influx of sequence data. These viewpoints build upon the pioneering work of David Sankoff, one of the founding fathers of computational biology, and mark the 50th anniversary of his first scientific article. The broad spectrum of rich contributions in this essential collection will[...]

Features

This authoritative text/reference presents a review of the history, current status, and potential future directions of computational biology in molecular evolution. Gathering together the unique insights of an international selection of prestigious researchers, this must-read volume examines the latest developments in the field, the challenges that remain, and the new avenues emerging from the growing [...]

Contents

Part I: Emergence of Standard Algorithms.- What's Behind Blast.- Forty Years of Model-Based Phylogeography.- How to Infer Ancestral Genome Features by Parsimony.- Duplication, Rearrangement and Reconciliation.- The Genesis of the DCJ Formula.- Part II: New Lights on Current Paradigms.- Large-Scale Multiple Sequence Alignment and Phylogeny Estimation.- Rearrangements in Phylogenetic Inference.- Status of Research on Insertion and Deletion Variations in the Human Population.- A Retrospective on Genomic Preprocessing for Comparative Genomics.- A Comparison of DCJ and Algebraic Distances.- [...]

Fields of interest

Computational Biology / Bioinformatics; Mathematical and Computational Biology; Bioinformatics; Mathematics of Computing

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4471-5297-2

Hardcover

2013. XII, 328 p. 86 illus., 45 illus. in color. (Computational Biology, Vol. 19)

\$129.00

ISBN 978-1-4471-5297-2

usually dispatched within 3 to 5 business days

M. Lupu, E. Kanoulas, Google Inc., Zurich, Switzerland; F. Loizides, Cyprus University of Technology, Limassol, Cyprus (Eds.)

Multidisciplinary Information Retrieval

6th Information Retrieval Facility Conference, IRFC 2013, Limassol, Cyprus, October 7-9, 2013, Proceedings

This book constitutes the proceedings of the 6th International Information Retrieval Facility Conference, IRFC 2013, held in Limassol, Cyprus, October 2013. The 8 papers presented together with 2 short papers were carefully reviewed and selected from 16 high-quality submissions. IRF conferences wish to bring young researchers into contact with industry at an early stage. This sixth conference aimed to tackle four complementary research areas: information retrieval, machine translations for search solutions, and interactive information access.

Features

This book constitutes the proceedings of the 6th International Information Retrieval Facility Conference, IRFC 2013, held in Limassol, Cyprus, October 2013. The 8 papers presented together with 2 short papers were carefully reviewed and selected from 16 high-quality submissions. IRF conferences wish to bring young researchers into contact with industry at an early stage. This sixth conference aimed to [...]

Contents

Multilingual and Cross-Lingual News Analysis in the Europe Media Monitor (EMM) (Extended Abstract).- Ontology Based Query Expansion with a Probabilistic Retrieval Model.- A Machine Learning Approach for Subjectivity Classification Based on Positional and Discourse Features.- Recall-Oriented Evaluation for Information Retrieval Systems.- Using 'Search Transitions' to Study Searchers' Investment of Effort: Experiences with Client and Server Side Logging.- An IR-Inspired Approach to Recovering Named Entity Tags in Broadcast News.- An Exploratory Study on Content-Based Filtering of Call for[...]

Fields of interest

Information Storage and Retrieval; Database Management; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41056-7

Softcover

2013. X, 111 p. 25 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8201)

\$72.00

ISBN 978-3-642-41056-7

usually dispatched within 3 to 5 business days

A. Petrosino, L. Maddalena, National Research Council, Naples, Italy; P. Pala, University of Florence, Florence, Italy; V. Cantoni, University of Pavia, Pavia, Italy; M. Ceccarelli, University of Sannio, Sannio, Italy; R.F. Murphy, Carnegie Mellon University, Pittsburgh, USA; A. Del Bimbo, University of Florence, Florence, Italy; M. Pantic, Imperial College London, London, United Kingdom; C. Grana, Università degli Studi, Modena, Italy; J. Oomen, G. Serra, M. Leo, National Research Council, Bari, Italy; D.P. Mandic, Imperial College London, London, United Kingdom; G. Pirlo, University of Bari, Bari, Italy; M. Fairhurst, University of Kent, Canterbury, United Kingdom; D. Impedovo, Dyrecta Lab, Bari, Italy (Eds.)

New Trends in Image Analysis and Processing, ICIAP 2013 Workshops

Naples, Italy, September 2013, Proceedings

This book constitutes the refereed proceedings of the workshops held with the 17th International Conference on Image Analysis and Processing, ICIAP 2013, held in Naples, Italy, in September 2013. The proceedings include papers from the five individual workshops focusing on topics of interest to the pattern recognition, image analysis, and computer vision communities, exploring emergent research directions or spotlight cross-disciplinary links with related fields and / or application areas.

Features

This book constitutes the refereed proceedings of the workshops held with the 17th International Conference on Image Analysis and Processing, ICIAP 2013, held in Naples, Italy, in September 2013. The proceedings include papers from the five individual workshops focusing on topics of interest to the pattern recognition, image analysis, and computer vision communities, exploring emergent research directions or [...]

Contents

pattern recognition.- image analysis.- computer vision.- links with related fields and / or application areas.

Fields of interest

Pattern Recognition; Artificial Intelligence (incl. Robotics); Image Processing and Computer Vision; Computers and Society

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41189-2

Softcover

2013. XXIV, 561 p. 229 illus. (Image Processing, Computer Vision, Pattern Recognition, and Graphics, Vol. 8158)

\$107.00

ISBN 978-3-642-41189-2

usually dispatched within 3 to 5 business days

I. Dimov, Bulgarian Academy of Sciences, Sofia, Bulgaria; I. Faragó, Eotvos Lorand University, Budapest, Hungary; L. Vulkov, University of Rousse, Rousse, Bulgaria (Eds.)

Numerical Analysis and Its Applications

5th International Conference, NAA 2012, Lozenetz, Bulgaria, June 15-20, 2012, Revised Selected Papers

This book constitutes thoroughly revised selected papers of the 5th International Conference on Numerical Analysis and Its Applications, NAA 2012, held in Lozenetz, Bulgaria, in June 2012. The 65 revised papers presented were carefully reviewed and selected from various submissions. The papers cover a broad area of topics of interest such as numerical approximation and computational geometry; numerical linear algebra and numerical solution of transcendental equation; numerical methods for differential equations; numerical stochastics, numerical modeling; and high performance scientific computing.

Features

This book constitutes thoroughly revised selected papers of the 5th International Conference on Numerical Analysis and Its Applications, NAA 2012, held in Lozenetz, Bulgaria, in June 2012. The 65 revised papers presented were carefully reviewed and selected from various submissions. The papers cover a broad area of topics of interest such as numerical approximation and computational geometry; numerical linear [...]

Contents

numerical approximation and computational geometry.- numerical linear algebra and numerical solution of transcendental equation.- numerical methods for differential equations.- numerical stochastics, numerical modeling.- high performance scientific computing.

Fields of interest

Numeric Computing; Algorithm Analysis and Problem Complexity; Simulation and Modeling; Discrete Mathematics in Computer Science; Numerical Analysis; Theoretical, Mathematical and Computational Physics

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41514-2

Softcover

2013. XII, 572 p. 135 illus. (Theoretical Computer Science and General Issues, Vol. 8236)

\$107.00

ISBN 978-3-642-41514-2

usually dispatched within 3 to 5 business days

R. Meersman, VU Brussels VUB-STAR Lab., Brussels, Belgium; H. Panetto, University of Lorraine, Lorraine, France; T. Dillon, La Trobe University, Melbourne, Australia; J. Eder, Universität Klagenfurt, Klagenfurt, Austria; Z. Bellahsene, LIRMM CNRS/Univ. Montpellier 2, Montpellier, France; N. Ritter, Universität Hamburg, Hamburg, Germany; P. De Leenheer, University of Amsterdam, Amsterdam, Netherlands; D. Dou, University of Oregon, Eugene, USA (Eds.)

On the Move to Meaningful Internet Systems: OTM 2013 Conferences

Confederated International Conferences: CoopIS, DOA-Truste Cloud and ODBASE 2013, Graz, Austria, September 9-13, 2013. Proceedings.

This volume constitutes the refereed proceedings of the confederated international conferences: Cooperative Information Systems (CoopIS 2013), Distributed Objects and Applications (DOA-Truste Cloud 2013), and Ontologies, Data Bases and Applications of SEmanics (ODBASE 2013) held as part of OTM 2013 in September 2013 in Graz, Austria. The 47 revised full papers presented together with 6 short papers and 5 keynotes were carefully reviewed and selected from a total of 137 submissions. The papers are organized in topical sections on business process management; process modelling; service management; social networking; models and schemas; technical advances in cloud computing; towards[...]

Features

This volume constitutes the refereed proceedings of the confederated international conferences: Cooperative Information Systems (CoopIS 2013), Distributed Objects and Applications (DOA-Truste Cloud 2013), and Ontologies, Data Bases and Applications of SEmanics (ODBASE 2013) held as part of OTM 2013 in September 2013 in Graz, Austria. The 47 revised full papers presented together with 6 short papers and 5 [...]

Fields of interest

Software Engineering; Information Storage and Retrieval; Information Systems Applications (incl.Internet); Artificial Intelligence (incl. Robotics); Systems and Data Security; Computer Appl. in Administrative Data Processing

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41029-1

Softcover

2013. XXX, 775 p. 269 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8185)

\$131.00

ISBN 978-3-642-41029-1

usually dispatched within 3 to 5 business days

Y.T. Demey, European Space Agency, Noordwijk, Netherlands; H. Panetto (Eds.)

On the Move to Meaningful Internet Systems: OTM 2013 Workshops

Confederated International Workshops: OTM Academy, OTM Industry Case Studies Program, ACM, EI2N, ISDE, META4eS, ORM, SeDeS, SINCOM, SMS and SOMOCO 2013, Graz, Austria, September 9 - 13, 2013, Proceedings

This volume constitutes the refereed proceedings of the international workshops, Confederated International Workshops: OTM Academy, OTM Industry Case Studies Program, ACM, EI2N, ISDE, META4eS, ORM, SeDeS, SINCOM, SMS and SOMOCO 2013, held as part of OTM 2013 in Graz, Austria, in September 2013. The 75 revised full papers presented together with 12 posters and 5 keynotes were carefully reviewed and selected from a total of 131 submissions. The papers are organized in topical sections on: On The Move Academy; Industry Case Studies Program; Adaptive Case Management and other non-workflow approaches to BPM; Enterprise Integration, Interoperability and Networking; Information Systems in[...]

Features

This volume constitutes the refereed proceedings of the international workshops, Confederated International Workshops: OTM Academy, OTM Industry Case Studies Program, ACM, EI2N, ISDE, META4eS, ORM, SeDeS, SINCOM, SMS and SOMOCO 2013, held as part of OTM 2013 in Graz, Austria, in September 2013. The 75 revised full papers presented together with 12 posters and 5 keynotes were carefully reviewed and selected [...]

Fields of interest

Artificial Intelligence (incl. Robotics); Information Storage and Retrieval; Information Systems Applications (incl.Internet); Computer Appl. in Administrative Data Processing; User Interfaces and Human Computer Interaction; Simulation and Modeling

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41032-1

Softcover

2013. XXXVI, 749 p. 252 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8186)

\$131.00

ISBN 978-3-642-41032-1

usually dispatched within 3 to 5 business days

B. Lakshmiraghavan

Practical ASP.NET Web API

Practical ASP.NET Web API provides you with a hands-on and code-focused demonstration of the ASP.NET Web API in action. From the very beginning, you'll be writing working code in order to see best practices and concepts in action. As the book progresses, the concepts and code will become more sophisticated. Beginning with an overview of the web service model in general and Web API in particular, you'll progress quickly to a detailed exploration of the request binding and response formatting that lie at the heart of Web API. You'll investigate various scenarios and see how they can be manipulated to achieve the results you need. Later in the book more sophisticated themes will be[...]

Features

Practical ASP.NET Web API provides you with a hands-on and code-focused demonstration of the ASP.NET Web API in action. From the very beginning, you'll be writing working code in order to see best practices and concepts in action. As the book progresses, the concepts and code will become more sophisticated. Beginning with an overview of the web service model in general and Web API in particular, [...]

Fields of interest

Computer Science (general)

Target groups

Popular/general

Type of publication

Professional book

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Softcover

2013. 340 p.

\$59.99

ISBN 978-1-4302-6175-9

usually dispatched within 3 to 5 business days

P. Sunderaraman

Practical Ext JS 4

Practical Ext JS 4 will get you up and running, using Ext JS 4.2 for your projects, as quickly as possible. After a quick refresher on some JavaScript basics, you will get to grips with Ext JS 4's OO concepts (such as mixins) and familiarize yourself with its UI components and layout. You'll learn all the core features of the Ext JS framework, such as its MVC architecture, theming and styling your applications, and displaying data through components such as grids, trees, and charts. You'll use the Ext JS components and create an entire application from scratch by following the many practical examples. Finally, you'll learn about unit testing and packaging to build and deploy better[...]

Features

Practical Ext JS 4 will get you up and running, using Ext JS 4.2 for your projects, as quickly as possible. After a quick refresher on some JavaScript basics, you will get to grips with Ext JS 4's OO concepts (such as mixins) and familiarize yourself with its UI components and layout. You'll learn all the core features of the Ext JS framework, such as its MVC architecture, theming and styling [...]

Fields of interest

Computer Science (general)

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-6073-8

Softcover

2013. XIV, 205 p. 99 illus.

\$49.99

ISBN 978-1-4302-6073-8

usually dispatched within 3 to 5 business days

K. Lee

Pro Objective-C

The Objective-C programming language continues to grow in popularity and usage because of the power and ease-of-use of the language itself, along with the numerous features that continue to be added to the platform. If you have a basic knowledge of the language and want to further your expertise, Pro Objective-C is the book for you. Pro Objective-C provides an in-depth, comprehensive guide to the language, its runtime, and key API's. It explains the key concepts of Objective-C in a clear, easy to understand manner, and also provides detailed coverage of its more complex features. In addition, the book includes numerous practical examples--code excerpts and complete applications--that[...]

Features

The Objective-C programming language continues to grow in popularity and usage because of the power and ease-of-use of the language itself, along with the numerous features that continue to be added to the platform. If you have a basic knowledge of the language and want to further your expertise, Pro Objective-C is the book for you. Pro Objective-C provides an in-depth, [...]

Fields of interest

Computer Science (general)

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-5050-0

Softcover

2013. 476 p.

\$49.99

ISBN 978-1-4302-5050-0

usually dispatched within 3 to 5 business days

S. Wright

Pro SharePoint 2013 App Development

Apps have taken the world by storm, and now they're taking SharePoint as well. The biggest new thing in SharePoint 2013, apps are the solution to creating custom code that runs on not just your own SharePoint deployment, but also on others' implementations as well. Pro SharePoint 2013 App Development is your must-have guide to developing app solutions that run on the SharePoint 2013 platform. Using step-by-step tutorials, author Steve Wright creates a sample SharePoint app throughout the course of the book, and you can walk with him through the entire lifecycle of a SharePoint app. Get expert guidance and advice on creating an app, provisioning it for use in SharePoint, securing it[...]

Features

Apps have taken the world by storm, and now they're taking SharePoint as well. The biggest new thing in SharePoint 2013, apps are the solution to creating custom code that runs on not just your own SharePoint deployment, but also on others' implementations as well. Pro SharePoint 2013 App Development is your must-have guide to developing app solutions that run on the SharePoint 2013 [...]

Fields of interest

Computer Science (general)

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-5884-1

Softcover

2013. 432 p.

\$49.99

ISBN 978-1-4302-5884-1

usually dispatched within 3 to 5 business days

S. Cummins

Pro SharePoint Disaster Recovery and High Availability

Few IT professionals take the time to learn what needs to be known to do disaster recovery well. Most labor under the pretense that good administration equals close to five-nines uptime. Most technical people do not see the value of planning for disasters until the unexpected has already happened, and the effects of a disaster involving a SharePoint farm#which today houses business information, line-of-business applications, sensitive information, extranets, and other highly important assets#can be staggering.Pro SharePoint Disaster Recovery and High Availability, Second Edition will take you through a step-by-step process to show how to build an awareness and reaction plan for the[...]

Features

Few IT professionals take the time to learn what needs to be known to do disaster recovery well. Most labor under the pretense that good administration equals close to five-nines uptime. Most technical people do not see the value of planning for disasters until the unexpected has already happened, and the effects of a disaster involving a SharePoint farm#which today houses business information, [...]

Fields of interest

Computer Science (general); Information Systems and Communication Service

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-6328-9

Softcover

2013. 264 p.

\$59.99

ISBN 978-1-4302-6328-9

usually dispatched within 3 to 5 business days

F. Software

Pro Windows Phone App Development

The Windows Phone 8 platform provides a remarkable opportunity for Windows developers to create state-of-the-art mobile applications using their existing skills and a familiar toolset. Pro Windows Phone App Development, Third Edition, helps you unlock the potential of this platform and create dazzling, visually rich, and highly functional applications for the Windows Phone Store and bring you up to speed on the new features the Windows Phone 8 API provides. For developers new to the Windows Phone platform#whether with .NET, iOS, or Android experience#this book starts by introducing the requirements, specifications, and basics of Windows Phone development, and then leads you through[...]

Features

The Windows Phone 8 platform provides a remarkable opportunity for Windows developers to create state-of-the-art mobile applications using their existing skills and a familiar toolset. Pro Windows Phone App Development, Third Edition, helps you unlock the potential of this platform and create dazzling, visually rich, and highly functional applications for the Windows Phone Store and bring you up to speed on [...]

Fields of interest

Computer Science (general)

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-4782-1

Softcover

2013. 560 p.

\$39.99

ISBN 978-1-4302-4782-1

usually dispatched within 3 to 5 business days

A. Rauber Du Bois, P. Trinder (Eds.)

Programming Languages

17th Brazilian Symposium, SBLP 2013, Brasília, Brazil, September 29- October 4, 2013, Proceedings

This book constitutes the proceedings of the 17th Brazilian Symposium on Programming Languages, SBLP 2013, held in Brasília, Brazil, in September/October 2013. The 10 full and 2 keynote talks were carefully reviewed and selected from 31 submissions. The papers are organized in topical sections on program generation and transformation, including domain-specific languages and model-driven development in the context of programming languages, programming paradigms and styles, including functional, object-oriented, aspect-oriented, scripting languages, real-time, service-oriented, multithreaded, parallel, and distributed programming, formal semantics and theoretical foundations, including[...]

Features

This book constitutes the proceedings of the 17th Brazilian Symposium on Programming Languages, SBLP 2013, held in Brasília, Brazil, in September/October 2013. The 10 full and 2 keynote talks were carefully reviewed and selected from 31 submissions. The papers are organized in topical sections on program generation and transformation, including domain-specific languages and model-driven development in the [...]

Contents

Exception Handling for Error Reporting in Parsing Expression Grammars.- LuaRocks - A Declarative and Extensible Package Management System for Lua.- On the Performance of Multidimensional Array Representations in Programming Languages Based on Virtual Execution Machines.- Modular Bialgebraic Semantics and Algebraic Laws.- A Double Effect λ -calculus for Quantum Computation.- Boilerplates for Reconfigurable Systems: A Language and Its Semantics.- Contextual Abstraction in a Type System for Component-Based High Performance Computing Platforms.- Towards a Domain-Specific Language for[...]

Fields of interest

Programming Languages, Compilers, Interpreters; Software Engineering; Programming Techniques; Computer Science (general)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40921-9

Softcover

2013. XVI, 151 p. 31 illus. (Programming and Software Engineering, Vol. 8129)

\$73.00

ISBN 978-3-642-40921-9

usually dispatched within 3 to 5 business days

A. Petrosino (Ed.)

Progress in Image Analysis and Processing, ICIAP 2013

Naples, Italy, September 9-13, 2013, Proceedings, Part I

This two volume set (LNCS 8156 and 8157) constitutes the refereed proceedings of the 17th International Conference on Image Analysis and Processing, ICIAP 2013, held in Naples, Italy, in September 2013. The 162 papers presented were carefully reviewed and selected from 354 submissions. The papers aim at highlighting the connection and synergies of image processing and analysis with pattern recognition and machine learning, human computer systems, biomedical imaging and applications, multimedia interaction and processing, 3D computer vision, and understanding objects and scene.

Features

This two volume set (LNCS 8156 and 8157) constitutes the refereed proceedings of the 17th International Conference on Image Analysis and Processing, ICIAP 2013, held in Naples, Italy, in September 2013. The 162 papers presented were carefully reviewed and selected from 354 submissions. The papers aim at highlighting the connection and synergies of image processing and analysis with pattern recognition and [...]

Contents

Highlighting the connection and synergies of image processing and analysis with pattern recognition and machine learning.- Human computer systems.- Biomedical imaging and applications.- Multimedia interaction and processing.- 3D computer vision, and understanding objects and scene.

Fields of interest

Image Processing and Computer Vision; Pattern Recognition; Artificial Intelligence (incl. Robotics); Algorithm Analysis and Problem Complexity

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41180-9

Softcover

2013. XXVIII, 858 p. 385 illus. (Image Processing, Computer Vision, Pattern Recognition, and Graphics, Vol. 8156)

\$143.00

ISBN 978-3-642-41180-9

usually dispatched within 3 to 5 business days

A. Petrosino (Ed.)

Progress in Image Analysis and Processing, ICIAP 2013

Naples, Italy, September 9-13, 2013, Proceedings, Part II

This two volume set (LNCS 8156 and 8157) constitutes the refereed proceedings of the 17th International Conference on Image Analysis and Processing, ICIAP 2013, held in Naples, Italy, in September 2013. The 162 papers presented were carefully reviewed and selected from 354 submissions. The papers aim at highlighting the connection and synergies of image processing and analysis with pattern recognition and machine learning, human computer systems, biomedical imaging and applications, multimedia interaction and processing, 3D computer vision, and understanding objects and scene.

Features

This two volume set (LNCS 8156 and 8157) constitutes the refereed proceedings of the 17th International Conference on Image Analysis and Processing, ICIAP 2013, held in Naples, Italy, in September 2013. The 162 papers presented were carefully reviewed and selected from 354 submissions. The papers aim at highlighting the connection and synergies of image processing and analysis with pattern recognition and [...]

Contents

Connection and synergies of image processing.- Analysis with pattern recognition and machine learning.- Human computer systems.- Biomedical imaging and applications.- Multimedia interaction and processing.- 3D computer vision and understanding objects and scene.

Fields of interest

Image Processing and Computer Vision; Pattern Recognition; Artificial Intelligence (incl. Robotics); Algorithm Analysis and Problem Complexity

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41183-0

Softcover

2013. XXVIII, 764 p. 342 illus. (Image Processing, Computer Vision, Pattern Recognition, and Graphics, Vol. 8157)

\$131.00

ISBN 978-3-642-41183-0

usually dispatched within 3 to 5 business days

W. Susilo, University of Wollongong, Wollongong, Australia; R. Reyhanitabar, Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland (Eds.)

Provable Security

7th International Conference, ProvSec 2013, Melaka, Malaysia, October 23-25, 2013, Proceedings

This book constitutes the refereed proceedings of the 7th International Conference on Provable Security, ProvSec 2013, held in Melaka, Malaysia, in October 2013. The 18 full papers presented together with 1 invited talk were carefully reviewed and selected from 44 submissions. The papers cover the following topics: key exchange protocols, security models, signature and signcryption schemes, authenticated encryption, theory, and public key encryption.

Features

This book constitutes the refereed proceedings of the 7th International Conference on Provable Security, ProvSec 2013, held in Melaka, Malaysia, in October 2013. The 18 full papers presented together with 1 invited talk were carefully reviewed and selected from 44 submissions. The papers cover the following topics: key exchange protocols, security models, signature and signcryption schemes, authenticated [...]

Contents

On Modeling Terrorist Frauds: Addressing Collusion in Distance Bounding Protocols.- Authenticated Key Exchange Protocols Based on Factoring Assumption.- Efficient, Pairing-Free, Authenticated Identity Based Key Agreement in a Single Round.- CIL Security Proof for a Password-Based Key Exchange.- Non Observability in the Random Oracle Model.- Indistinguishability against Chosen Ciphertext Verification Attack Revisited: The Complete Picture.- Input-Aware Equivocable Commitments and UC-secure Commitments with Atomic Exchanges.- Towards Anonymous Ciphertext Indistinguishability with Identity[...]

Fields of interest

Data Encryption; Systems and Data Security; Computers and Society; e-commerce / e-business; Computer Appl. in Administrative Data Processing; Computer Science (general)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41226-4

Softcover

2013. X, 347 p. 36 illus. (Security and Cryptology, Vol. 8209)

\$83.00

ISBN 978-3-642-41226-4

usually dispatched within 3 to 5 business days

P.A. Abdulla, Uppsala University, Uppsala, Sweden; I. Potapov (Eds.)

Reachability Problems

7th International Workshop, RP 2013, Uppsala, Sweden, September 24–26, 2013, Proceedings

This book constitutes the refereed proceedings of the 7th International Workshop on Reachability Problems, RP 2013, held in Uppsala, Sweden, in September 2013. The 19 revised papers (The 14 revised papers were carefully reviewed and selected from 24 submissions in addition to 5 invited talks) were carefully reviewed and selected from 24 submissions. Topics of interest include reachability for finite state systems; rewriting systems, reachability analysis in counter/timed/cellular/communicating automata; Petri-nets; computational aspects of semigroups, groups and rings; reachability in dynamical and hybrid systems; frontiers between decidable and undecidable reachability problems; [...]

Features

This book constitutes the refereed proceedings of the 7th International Workshop on Reachability Problems, RP 2013, held in Uppsala, Sweden, in September 2013. The 19 revised papers (The 14 revised papers were carefully reviewed and selected from 24 submissions in addition to 5 invited talks) were carefully reviewed and selected from 24 submissions. Topics of interest include reachability for finite state [...]

Contents

Reachability for finite state systems.- Rewriting systems, reachability analysis in counter/timed/cellular/communicating automata.- Petri-nets.- Computational aspects of semigroups, groups and rings.- Reachability in dynamical and hybrid systems.- Frontiers between decidable and undecidable reachability problems.- Complexity and decidability aspects, predictability in iterative maps and new computational paradigms.

Fields of interest

Logics and Meanings of Programs; Software Engineering; Mathematical Logic and Formal Languages; Programming Languages, Compilers, Interpreters; Algorithm Analysis and Problem Complexity; Computation by Abstract Devices

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41035-2

Softcover

2013. XII, 223 p. 60 illus. (Theoretical Computer Science and General Issues, Vol. 8169)

\$72.00

ISBN 978-3-642-41035-2

usually dispatched within 3 to 5 business days

J. Derrick, University of Sheffield, Sheffield, United Kingdom; E.A. Boiten, University of Kent, Canterbury, United Kingdom

Refinement in Z and Object-Z

Foundations and Advanced Applications

Refinement is one of the cornerstones of the formal approach to software engineering, and its use in various domains has led to research on new applications and generalisation. This book brings together this important research in one volume, with the addition of examples drawn from different application areas. It covers four main themes: Data refinement and its application to ZGeneralisations of refinement that change the interface and atomicity of operationsRefinement in Object-ZModelling state and behaviour by combining Object-Z with CSPRefinement in Z and Object-Z: Foundations and Advanced Applications provides an invaluable overview of recent research for academic and industrial[...]

Features

Refinement is one of the cornerstones of the formal approach to software engineering, and its use in various domains has led to research on new applications and generalisation. This book brings together this important research in one volume, with the addition of examples drawn from different application areas. It covers four main themes: Data refinement and its application to [...]

Contents

Preface.- Part I – Refining Z Specifications.- An Introduction to Z.- Simple Refinement.- Data Refinement and Simulations.- Refinement in Z.- Calculating Refinements.- Promotion.- Testing and Refinement.- A Single Simulation Rule.- Part II – Interfaces and Operations: ADTs Viewed in an Environment.- Refinement, Observation and Modification.- IO Refinement.- Weak Refinement.- Non-Atomic Refinement.- Case Study: A Digital and Analogue Watch.- Further Generalisations.- Part III – Object-Oriented Refinement.- An Introduction to Object Z.- Refinement in Object-Z.- Class Refinement.- Part IV[...]

Fields of interest

Mathematical Logic and Formal Languages; Software Engineering

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4471-5354-2

Hardcover

2014. XVIII, 492 p. 49 illus.

\$129.00

ISBN 978-1-4471-5354-2

usually dispatched within 3 to 5 business days

S. Stolfo, Columbia University, New York, USA; A. Stavrou, George Mason University, Fairfax, USA; C. Wright, Portland State University, Portland, USA (Eds.)

Research in Attacks, Intrusions, and Defenses

16th International Symposium, RAID 2013, Rodney Bay, St. Lucia, October 23–25, 2013, Proceedings

This book constitutes the proceedings of the 16th International Symposium on Research in Attacks, Intrusions and Defenses, former Recent Advances in Intrusion Detection, RAID 2013, held in Rodney Bay, St. Lucia in October 2013. The volume contains 22 full papers that were carefully reviewed and selected from 95 submissions, as well as 10 poster papers selected from the 23 submissions. The papers address all current topics in computer security ranged from hardware-level security, server, web, mobile, and cloud-based security, malware analysis, and web and network privacy.

Features

This book constitutes the proceedings of the 16th International Symposium on Research in Attacks, Intrusions and Defenses, former Recent Advances in Intrusion Detection, RAID 2013, held in Rodney Bay, St. Lucia in October 2013. The volume contains 22 full papers that were carefully reviewed and selected from 95 submissions, as well as 10 poster papers selected from the 23 submissions. The papers address [...]

Contents

Hardware-level Security.- A Primitive for Revealing Stealthy Peripheral-based Attacks on the Computing Platform's Main Memory.- Hypervisor Memory Forensics.- Server-level and OS-level Security.- Server-side code injection attacks: a historical perspective.- Check my profile: Leveraging static analysis for fast and accurate detection of ROP gadgets.- Systematic Analysis of Defenses Against Return-Oriented Programming.- SILVER: Fine-grained and Transparent Protection Domain Primitives in Commodity OS Kernel.- Malware.- API Chaser: Anti-analysis Resistant Malware Analyzer.- FIRMA: Malware[...]

Fields of interest

Systems and Data Security; Computer Communication Networks; e-commerce / e-business; Information Systems Applications (incl.Internet)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41283-7

Softcover

2013. XII, 476 p. 139 illus. (Security and Cryptology, Vol. 8145)

\$95.00

ISBN 978-3-642-41283-7

usually dispatched within 3 to 5 business days

P. Lingras, Saint Mary's University, Halifax, Canada; M. Wolski, Maria Curie-Skłodowska University, Lublin, Poland; C. Cornelis, University of Granada, Granada, Spain; S. Mitra, Indian Statistical Institute, Kolkata, India; P. Wasilewski, University of Warsaw, Warsaw, Poland (Eds.)

Rough Sets and Knowledge Technology

8th International Conference, RSKT 2013, Halifax, NS, Canada, October 11-14, 2013, Proceedings

This book constitutes the thoroughly refereed conference proceedings of the 8th International Conference on Rough Sets and Knowledge Technology, RSKT 2013, held in Halifax, Canada in October 2013 as one of the co-located conferences of the 2013 Joint Rough Set Symposium, JRS 2013. The 69 papers (including 44 regular and 25 short papers) included in the JRS proceedings (LNCS 8170 and LNCS 8171) were carefully reviewed and selected from 106 submissions. The papers in this volume cover topics such as history and future of rough sets; foundations and probabilistic rough sets; rules, reducts, ensembles; new trends in computing; three-way decision rough sets; and learning, predicting, modeling.

Features

This book constitutes the thoroughly refereed conference proceedings of the 8th International Conference on Rough Sets and Knowledge Technology, RSKT 2013, held in Halifax, Canada in October 2013 as one of the co-located conferences of the 2013 Joint Rough Set Symposium, JRS 2013. The 69 papers (including 44 regular and 25 short papers) included in the JRS proceedings (LNCS 8170 and LNCS 8171) were carefully [...]

Contents

History and future of rough sets.- Foundations and probabilistic rough sets.- Rules, reducts, ensembles.- New trends in computing.- Three-way decision rough sets.- Learning, predicting, modeling.

Fields of interest

Artificial Intelligence (incl. Robotics); Numeric Computing; Data Mining and Knowledge Discovery; Computer Imaging, Vision, Pattern Recognition and Graphics

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41298-1

Softcover

2013. XIV, 414 p. 84 illus. (Lecture Notes in Artificial Intelligence, Vol. 8171)

\$95.00

ISBN 978-3-642-41298-1

usually dispatched within 3 to 5 business days

D. Ciucci, University of Milano-Bicocca, Milano, Italy; M. Inuiguchi, Osaka University, Osaka, Japan; Y. Yao, University of Regina, Regina, Canada; D. Slezak, University of Warsaw, Warsaw, Poland; G. Wang, Chongqing Institute of Green and, Chongqing, China (P.R.) (Eds.)

Rough Sets, Fuzzy Sets, Data Mining, and Granular Computing

14th International Conference, RSFDGrC 2013, Halifax, NS, Canada, October 11-14, 2013. Proceedings

This book constitutes the thoroughly refereed conference proceedings of the 14th International Conference on Rough Sets, Fuzzy Sets, Data Mining and Granular Computing, RSFDGrC 2013, held in Halifax, Canada in October 2013 as one of the co-located conference of the 2013 Joint Rough Set Symposium, JRS 2013. The 69 papers (including 44 regular and 25 short papers) included in the JRS proceedings (LNCS 8170 and LNCS 8171) were carefully reviewed and selected from 106 submissions. The papers in this volume cover topics such as inconsistency, incompleteness, non-determinism; fuzzy and rough hybridization; granular computing and covering-based rough sets; soft clustering; image and medical [...]

Features

This book constitutes the thoroughly refereed conference proceedings of the 14th International Conference on Rough Sets, Fuzzy Sets, Data Mining and Granular Computing, RSFDGrC 2013, held in Halifax, Canada in October 2013 as one of the co-located conference of the 2013 Joint Rough Set Symposium, JRS 2013. The 69 papers (including 44 regular and 25 short papers) included in the JRS proceedings (LNCS 8170 and [...])

Contents

Inconsistency, Incompleteness, non-determinism.- Fuzzy and Rough Hybridization.- Granular Computing and Covering-Based Rough Sets.- Soft Clustering.- Image and Medical Data Analysis.

Fields of interest

Artificial Intelligence (incl. Robotics); Data Mining and Knowledge Discovery; Computation by Abstract Devices; Pattern Recognition

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41217-2

Softcover

2013. XIV, 398 p. 77 illus. (Lecture Notes in Artificial Intelligence, Vol. 8170)

\$95.00

ISBN 978-3-642-41217-2

usually dispatched within 3 to 5 business days

D. Hernández-Leo, Universitat Pompeu Fabra, Barcelona, Spain; T. Ley, Tallinn University, Tallinn, Estonia; R. Klamma, RWTH Aachen, Aachen, Germany; A. Harrer (Eds.)

Scaling up Learning for Sustained Impact

8th European Conference on Technology Enhanced Learning, EC-TEL 2013, Paphos, Cyprus, September 17-21, 2013, Proceedings

This book constitutes the refereed proceedings of the 8th European Conference on Technology Enhanced Learning, EC-TEL 2013, held in Paphos, Cyprus, in September 2013. The 31 full papers, 18 short papers, 14 demonstrations and 29 posters presented were carefully reviewed and selected from 194 submissions. The papers are organized in topical sections. The topics addressed include open educational resources (OER), massive open online courses (MOOC), schools of the future, orchestration of learning activities, learning networks, teacher networks, bring your own device (BYOD), social media, learning analytics, personalization, mobile learning, computer-supported collaborative learning, [...]

Features

This book constitutes the refereed proceedings of the 8th European Conference on Technology Enhanced Learning, EC-TEL 2013, held in Paphos, Cyprus, in September 2013. The 31 full papers, 18 short papers, 14 demonstrations and 29 posters presented were carefully reviewed and selected from 194 submissions. The papers are organized in topical sections. The topics addressed include open educational resources [...]

Contents

open educational resources (OER).- massive open online courses (MOOC).- schools of the future.- orchestration of learning activities.- learning networks.- teacher networks.- bring your own device (BYOD).- social media.- learning analytics.- personalization.- mobile learning.- computer-supported collaborative learning.- game-based and simulation-based learning.- learning design.

Fields of interest

Information Systems Applications (incl. Internet); Artificial Intelligence (incl. Robotics); Information Storage and Retrieval; Computer Communication Networks; User Interfaces and Human Computer Interaction; Data Mining and Knowledge Discovery

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40813-7

Softcover

2013. XXII, 650 p. 174 illus. (Programming and Software Engineering, Vol. 8095)

\$119.00

ISBN 978-3-642-40813-7

usually dispatched within 3 to 5 business days

S. Taha, University of Waterloo, Waterloo, Canada; X.(. Shen, Univ of Waterloo, Waterloo, Canada

K. Markantonakis, K. Mayes (Eds.)

R. Accorsi, University of Freiburg, Freiburg, Germany; S. Ranise, Fondazione Bruno Kessler (FBK), Trento, Italy (Eds.)

Secure IP Mobility Management for VANET

This brief presents the challenges and solutions for VANETs' security and privacy problems occurring in mobility management protocols including Mobile IPv6 (MIPv6), Proxy MIPv6 (PMIPv6), and Network Mobility (NEMO). The authors give an overview of the concept of the vehicular IP-address configurations as the prerequisite step to achieve mobility management for VANETs, and review the current security and privacy schemes applied in the three mobility management protocols. Throughout the brief, the authors propose new schemes and protocols to increase the security of IP addresses within VANETs including an anonymous and location privacy-preserving scheme for the MIPv6 protocol, a[...]

Features

This brief presents the challenges and solutions for VANETs' security and privacy problems occurring in mobility management protocols including Mobile IPv6 (MIPv6), Proxy MIPv6 (PMIPv6), and Network Mobility (NEMO). The authors give an overview of the concept of the vehicular IP-address configurations as the prerequisite step to achieve mobility management for VANETs, and review the current security and [...]

Contents

Introduction.- Anonymity and Location Privacy for Mobile IP Heterogeneous Networks.- Multi-hop Mobile Authentication for PMIP Networks.- Physical-layer Location Privacy for Mobile Public Hotspots in a NEMO-based VANET.- Conclusions and Future Directions.

Fields of interest

Systems and Data Security; Computer Communication Networks; Information Systems Applications (incl.Internet); Communications Engineering, Networks

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-01350-3

Softcover

2013. IX, 106 p. 46 illus. (SpringerBriefs in Computer Science)

\$54.99

ISBN 978-3-319-01350-3

usually dispatched within 3 to 5 business days

Secure Smart Embedded Devices, Platforms and Applications

New generations of IT users are increasingly abstracted from the underlying devices and platforms that provide and safeguard their services. As a result they may have little awareness that they are critically dependent on the embedded security devices that are becoming pervasive in daily modern life. Secure Smart Embedded Devices, Platforms and Applications provides a broad overview of the many security and practical issues of embedded devices, tokens, and their operation systems, platforms and main applications. It also addresses a diverse range of industry/government initiatives and considerations, while focusing strongly on technical and practical security issues. The benefits and[...]

Features

New generations of IT users are increasingly abstracted from the underlying devices and platforms that provide and safeguard their services. As a result they may have little awareness that they are critically dependent on the embedded security devices that are becoming pervasive in daily modern life. Secure Smart Embedded Devices, Platforms and Applications provides a broad overview of the many [...]

Contents

An Introduction to Smart Cards and RFIDs.- Embedded DSP Devices.- Microprocessors & Microcontrollers Security.- An Introduction to the Trusted Platform Module and Mobile Trusted Module.- Hardware and VLSI Designs.- Information Security Best Practices.- Smart Card Security.- Graphics Processing Units.- A Survey of Recent Results in FPGA Security and Intellectual Property Protection.- Mobile Communication Security Controllers.- Security of Embedded Location Systems.- Automotive Embedded Systems.- Analysis of Potential Vulnerabilities in Payment Terminals.- Wireless Sensor Nodes.- Near[...]

Fields of interest

Systems and Data Security; Data Structures, Cryptology and Information Theory; Information Systems Applications (incl.Internet); Computer Systems Organization and Communication Networks; Communications Engineering, Networks

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7914-7

Hardcover

2014. XLI, 568 p. 135 illus.

\$149.00

ISBN 978-1-4614-7914-7

usually dispatched within 3 to 5 business days

Security and Trust Management

9th International Workshop, STM 2013, Egham, UK, September 12-13, 2013, Proceedings

This book constitutes the refereed proceedings of the 9th International Workshop on Security and Trust Management, STM 2013, held in Egham, UK, in September 2013 - in conjunction with the 18th European Symposium Research in Computer Security (ESORICS 2013). The 15 revised full papers including two invited talks were carefully reviewed and selected from 47 submissions. The papers are organized into topical sections on policy enforcement and monitoring; access control; trust, reputation, and privacy; distributed systems and physical security; authentication and security policies.

Features

This book constitutes the refereed proceedings of the 9th International Workshop on Security and Trust Management, STM 2013, held in Egham, UK, in September 2013 - in conjunction with the 18th European Symposium Research in Computer Security (ESORICS 2013). The 15 revised full papers including two invited talks were carefully reviewed and selected from 47 submissions. The papers are organized into topical [...]

Contents

Privacy.- On Enhancement of 'Share The Secret' Scheme for Location Privacy.- New Attacks against Transformation-Based Privacy-Preserving Linear Programming.- Maintaining Database Anonymity in the Presence of Queries.- Network, Web, and Mobile Security.- A Probabilistic Framework for Distributed Localization of Attackers in MANETs.- MITHYS: Mind The Hand You Shake.- Evaluating the manageability of web browsers controls.- Security Protocols.- Using Interpolation for the Verification of Security Protocols.- RDAS: A Symmetric Key Scheme for Authenticated Query Processing in Outsourced[...]

Fields of interest

Systems and Data Security; Management of Computing and Information Systems; Data Encryption; Algorithm Analysis and Problem Complexity; Software Engineering

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41097-0

Softcover

2013. X, 235 p. 53 illus. (Security and Cryptology, Vol. 8203)

\$72.00

ISBN 978-3-642-41097-0

usually dispatched within 3 to 5 business days

S.M. Thampi, Indian Inst. of Information Technology, Trivandrum, India; P.K. Atrey, University of Winnipeg, Winnipeg, Canada; C.I. Fan, National Sun Yat-sen University, Kaohsiung, Taiwan; G. Martinez Perez, University of Murcia, Murcia, Spain (Eds.)

Security in Computing and Communications

International Symposium, SSCC 2013, Mysore, India, August 22-24, 2013. Proceedings

This book constitutes the refereed proceedings of the International Symposium on Security in Computing and Communications, SSCC 2013, held in Mysore, India, in August 2013. The 24 revised full papers presented together with 15 poster papers were carefully reviewed and selected from 111 submissions. The papers cover all aspects of secure computing and communication in networking and distributed systems such as cloud-based data centers.

Features

This book constitutes the refereed proceedings of the International Symposium on Security in Computing and Communications, SSCC 2013, held in Mysore, India, in August 2013. The 24 revised full papers presented together with 15 poster papers were carefully reviewed and selected from 111 submissions. The papers cover all aspects of secure computing and communication in networking and distributed systems such as [...]

Contents

A Novel Approach for a Hardware-Based Secure Process Isolation in an Embedded System.- Signature Embedding in the Functional Description of Reversible.- Circuit.- Detecting Laser Fault Injection for Smart Cards Using Security Automata.- Virtual World Authentication Using the Smart Card Web Server.- A More Efficient and Secure Authentication Scheme over Insecure Networks Using Smart Cards.- A Combined Crypto-steganographic Approach for Information Hiding in Audio Signals Using Sub-band Coding, Compressive Sensing and Singular Value Decomposition.

Fields of interest

Systems and Data Security; Computer Communication Networks; e-commerce / e-business

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40575-4

Softcover

2013. XVI, 404 p. 149 illus. (Communications in Computer and Information Science, Vol. 377)

\$107.00

ISBN 978-3-642-40575-4

usually dispatched within 3 to 5 business days

B. Gierlichs, KU Leuven, Heverlee, Belgium; S. Guilley, D. Mukhopadhyay, IIT Kharagpur, Kharagpur, India (Eds.)

Security, Privacy, and Applied Cryptography Engineering

Third International Conference, SPACE 2013, Kharagpur, India, October 19-23, 2013, Proceedings

This book constitutes the refereed proceedings of the Third International Conference on Security, Privacy and Applied Cryptography Engineering held in Kharagpur, India, in October 2013. The 12 papers presented were carefully reviewed and selected from 39 submissions. The papers are organized in topical sections on implementations and protocols, side channel attacks and countermeasures, identity-based identification schemes, and signatures.

Features

This book constitutes the refereed proceedings of the Third International Conference on Security, Privacy and Applied Cryptography Engineering held in Kharagpur, India, in October 2013. The 12 papers presented were carefully reviewed and selected from 39 submissions. The papers are organized in topical sections on implementations and protocols, side channel attacks and countermeasures, identity-based [...]

Contents

Three Design Dimensions of Secure Embedded Systems.- Investigating the Application of One Instruction Set Computing for Encrypted Data Computation.- Alphanumeric Shellcode Generator for ARM Architecture.- SIMD-Based Implementations of Sieving in Integer-Factoring Algorithms.- Strong Security and Privacy of RFID System for Internet of Things Infrastructure.- Correlation-Immune Boolean Functions for Leakage Squeezing and Rotating S-Box Masking against Side Channel Attacks.- A Time Series Approach for Profiling Attack.- Algorithms for Switching between Boolean and Arithmetic Masking of [...]

Fields of interest

Systems and Data Security; Computer Communication Networks; Data Encryption; Management of Computing and Information Systems

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41223-3

Softcover

2013. XIV, 191 p. 35 illus. (Security and Cryptology, Vol. 8204)

\$72.00

ISBN 978-3-642-41223-3

usually dispatched within 3 to 5 business days

M. Ma, The Glasgow School of Art, Glasgow, United Kingdom; M. Fradinho Oliveira, SINTEF Technology and Society, Trondheim, Norway; S. Petersen, SINTEF Technology and Society, Trondheim, Norway; J. Baalsrud Hauge, University of Bremen, Bremen, Germany (Eds.)

Serious Games Development and Applications

4th International Conference, SGDA 2013, Trondheim, Norway, September 25-27, 2013, Proceedings

This book constitutes the refereed proceedings of the 4th International Conference on Serious Games Development and Applications, SGDA 2013, held in Trondheim, Norway, in September 2013. The 32 papers (23 full papers, 9 short papers/posters and 2 invited keynotes) presented were carefully reviewed and selected from various submissions. The papers are organized in topical sections on games for health, games for education and training, games for other purposes, game design and theories, gaming interface, policy matters.

Features

This book constitutes the refereed proceedings of the 4th International Conference on Serious Games Development and Applications, SGDA 2013, held in Trondheim, Norway, in September 2013. The 32 papers (23 full papers, 9 short papers/posters and 2 invited keynotes) presented were carefully reviewed and selected from various submissions. The papers are organized in topical sections on games for health, games for [...]

Contents

Games for health.- Games for education and training.- Games for other purposes.- Game design and theories.- Gaming interface, policy matters.

Fields of interest

Personal Computing; Computers and Education; Artificial Intelligence (incl. Robotics); Information Systems Applications (incl. Internet); User Interfaces and Human Computer Interaction; Computers and Society

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40789-5

Softcover

2013. XII, 321 p. 120 illus. (Image Processing, Computer Vision, Pattern Recognition, and Graphics, Vol. 8101)

\$83.00

ISBN 978-3-642-40789-5

usually dispatched within 3 to 5 business days

N. Brisaboa, Universidade da Coruña, A Coruña, Spain; O. Pedreira, Universidade da Coruña, A Coruña, Spain; P. Zezula, Masaryk University, Brno, Czech Republic (Eds.)

Similarity Search and Applications

6th International Conference, SISAP 2013, A Coruña, Spain, October 2-4, 2013, Proceedings

This book constitutes the refereed proceedings of the 6th International Conference on Similarity Search and Applications, SISAP 2013, held in A Coruña, Spain, in October 2013. The 19 full papers, 6 short papers and 2 demo papers, presented were carefully reviewed and selected from 44 submissions. The papers are organized in topical sections on new scenarios and approaches; improving similarity search methods and techniques; metrics and evaluation; applications and specific domains; and implementation and engineering solutions.

Features

This book constitutes the refereed proceedings of the 6th International Conference on Similarity Search and Applications, SISAP 2013, held in A Coruña, Spain, in October 2013. The 19 full papers, 6 short papers and 2 demo papers, presented were carefully reviewed and selected from 44 submissions. The papers are organized in topical sections on new scenarios and approaches; improving similarity search methods [...]

Contents

New scenarios and approaches.- Improving similarity search methods and techniques.- Metrics and evaluation.- Applications and specific domains.- Implementation and engineering solutions.

Fields of interest

Information Storage and Retrieval; Pattern Recognition; Data Structures; Database Management; Algorithm Analysis and Problem Complexity; Numeric Computing

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41061-1

Softcover

2013. XII, 332 p. 128 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8199)

\$83.00

ISBN 978-3-642-41061-1

usually dispatched within 3 to 5 business days

R. Hierons, M.G. Merayo, M. Bravetti, Dipartimento di Scienze dell'Informazi, Bologna, Italy (Eds.)

Software Engineering and Formal Methods

11th International Conference, SEFM 2013, Madrid, Spain, September 25-27, 2013, Proceedings

This book constitutes the refereed proceedings of the 11th International Conference on Software Engineering and Formal Methods, SEFM 2013, held in Madrid, Spain, in September 2013. The 21 full papers included in this volume were carefully reviewed and selected from 58 submissions. They are organized in topical section on real-time systems, verification, types and inference, static analysis, testing and run-time verification, and synthesis and transformation.

Features

This book constitutes the refereed proceedings of the 11th International Conference on Software Engineering and Formal Methods, SEFM 2013, held in Madrid, Spain, in September 2013. The 21 full papers included in this volume were carefully reviewed and selected from 58 submissions. They are organized in topical section on real-time systems, verification, types and inference, static analysis, testing and run-time [...]

Contents

Verifying MARTE/CCSL Mode Behaviors Using UPPAAL.- A Transformation Approach for Multiform Time Requirements.- Real-Time Migration Properties of rTiMoVerified in Uppaal.- Verified Protocol to Implement Multi-way Synchronisation and Interleaving in CSP.- From Extraction of Logical Specifications to Deduction-Based Formal Verification of Requirements Models.- Model Checking of Security-Critical Applications in a Model-Driven Approach.- Lifting Verification Results for Preemption Statements.- Rule-Level Verification of Graph Transformations for Invariants Based on Edges' Transitive[...]

Fields of interest

Software Engineering; Logics and Meanings of Programs; Programming Languages, Compilers, Interpreters; Mathematical Logic and Formal Languages; Computer Communication Networks; Programming Techniques

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40560-0

Softcover

2013. XVIII, 321 p. 113 illus. (Programming and Software Engineering, Vol. 8137)

\$83.00

ISBN 978-3-642-40560-0

usually dispatched within 3 to 5 business days

A. Gorbenko, A. Romanovsky, Newcastle University, Newcastle upon Tyne, United Kingdom; V. Kharchenko (Eds.)

Software Engineering for Resilient Systems

5th International Workshop, SERENE 2013, Kiev, Ukraine, October 3-4, 2013, Proceedings

This book constitutes the refereed proceedings of the 5th International Workshop on Software Engineering for Resilient Systems, SERENE 2013, held in Kiev, Ukraine, in October 2013. The 13 revised full papers were carefully reviewed and selected from 21 submissions. The papers are organized in topical sections on resilient software and design, rigorous reasoning, applications, concepts, and analysis.

Features

This book constitutes the refereed proceedings of the 5th International Workshop on Software Engineering for Resilient Systems, SERENE 2013, held in Kiev, Ukraine, in October 2013. The 13 revised full papers were carefully reviewed and selected from 21 submissions. The papers are organized in topical sections on resilient software and design, rigorous reasoning, applications, concepts, and analysis.

Contents

Empirical Assessment of Resilience.- Security-Informed Safety: If It's Not Secure, It's Not Safe.- Engineering a Platform for Mission Planning of Autonomous and Resilient Quadrotors.- Towards Agile Development of Critical Software.- Supporting the Evolution of Free and Open Source Software Distributions.- Optimizing Verification of Structurally Evolving Algebraic Petri Nets.- A Case Study in Refinement-Based Modelling of a Resilient Control System.- Synthesis of Resilient Choreographies.- Formal Development and Quantitative Assessment of a Resilient Multi-robotic System.- The SafeCap[...]

Fields of interest

Software Engineering; Computer Communication Networks; Information Systems Applications (incl.Internet); Operating Systems; Logics and Meanings of Programs

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40893-9

Softcover

2013. X, 199 p. 87 illus. (Programming and Software Engineering, Vol. 8166)

\$72.00

ISBN 978-3-642-40893-9

usually dispatched within 3 to 5 business days

M. Erwig, Oregon State University, Corvallis, USA; R.F. Paige, University of York, York, United Kingdom; E. Van Wyk, University of Minnesota, Minneapolis, USA (Eds.)

Software Language Engineering

6th International Conference, SLE 2013, Indianapolis, IN, USA, October 26-28, 2013. Proceedings

This book constitutes the refereed proceedings of the 6th International Conference on Software Language Engineering, SLE 2013, held in Indianapolis, IN, USA, in October 2013. The 17 technical papers presented together with 2 tool demonstration papers and one keynote were carefully reviewed and selected from 56 submissions. SLE's foremost mission is to encourage, synthesize and organize communication between communities that have traditionally looked at software languages from different and yet complementary perspectives. The papers are organized in topical sections on domain-specific languages; language patterns and evolution; grammars; tools; language analysis; and meta- and megamodelling.

Features

This book constitutes the refereed proceedings of the 6th International Conference on Software Language Engineering, SLE 2013, held in Indianapolis, IN, USA, in October 2013. The 17 technical papers presented together with 2 tool demonstration papers and one keynote were carefully reviewed and selected from 56 submissions. SLE's foremost mission is to encourage, synthesize and organize communication between [...]

Contents

Domain-Specific Languages.- Language Patterns and Evolution.- Grammars.- Tools.- Language Analysis.- Meta- and Megamodelling.

Fields of interest

Programming Languages, Compilers, Interpreters; Software Engineering; Mathematical Logic and Formal Languages; Artificial Intelligence (incl. Robotics); Simulation and Modeling; Management of Computing and Information Systems

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-02653-4

Softcover

2013. XII, 385 p. 156 illus. (Programming and Software Engineering, Vol. 8225)

\$83.00

ISBN 978-3-319-02653-4

usually dispatched within 3 to 5 business days

O. Kurland, M. Lewenstein, Bar-Ilan University, Ramat Gan, Israel; E. Porat, Bar-Ilan University, Ramat Gan, Israel (Eds.)

String Processing and Information Retrieval

20th International Symposium, SPIRE 2013, Jerusalem, Israel, October 7-9, 2013, Proceedings

This book constitutes the refereed proceedings of the 20th International Symposium on String Processing and Information Retrieval, SPIRE 2013, held in Jerusalem, Israel, in October 2013. The 18 full papers, 10 short papers were carefully reviewed and selected from 60 submissions. The program also featured 4 keynote speeches. The following topics are covered: fundamentals algorithms in string processing and information retrieval; SP and IR techniques as applied to areas such as computational biology, DNA sequencing, and Web mining.

Features

This book constitutes the refereed proceedings of the 20th International Symposium on String Processing and Information Retrieval, SPIRE 2013, held in Jerusalem, Israel, in October 2013. The 18 full papers, 10 short papers were carefully reviewed and selected from 60 submissions. The program also featured 4 keynote speeches. The following topics are covered: fundamentals algorithms in string processing and [...]

Contents

Consolidating and Exploring information via Textual Inference.- Pattern Discovery and Listing in Graphs.- Efficient Approximation of Edit Distance.- Nowcasting with Google Trends.- Space-efficient Construction of the Burrows-Wheeler Transform.- Using Mutual Inuence to Improve Recommendations.- Position-Restricted Substring Searching Over Small Alphabets.- Simulation Study of Multi-threading in Web Search Engine Processors.- Query Processing in Highly-Loaded Search Engines.- Indexes for Jumbled Pattern Matching in Strings, Trees and Graphs.- Adaptive Data Structures for Permutations and [...]

Fields of interest

Information Storage and Retrieval; Pattern Recognition; Algorithm Analysis and Problem Complexity; Data Mining and Knowledge Discovery

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-02431-8

Softcover

2013. XII, 312 p. 62 illus. (Theoretical Computer Science and General Issues, Vol. 8214)

\$83.00

ISBN 978-3-319-02431-8

usually dispatched within 3 to 5 business days

L. Uden, Staffordshire University, Stafford, United Kingdom; Y.-H. Tao, National University of Kaohsiung, Kaohsiung, Taiwan; H.-C. Yang, I.-H. Ting, National University of Kaohsiung, Kaohsiung, Taiwan (Eds.)

The 2nd International Workshop on Learning Technology for Education in Cloud

Proceedings from the 2013 LTEC conference in Kaohsiung, Taiwan. The papers examine diverse aspects of Learning Technology for Education in Cloud environments, including social, technical and infrastructure implications. Also addressed is the question of how cloud computing can be used to design applications to support real time on demand learning using technologies. The workshop proceedings provide opportunities for delegates to discuss the latest research in TEL (Technology Enhanced Learning) and its impacts for learners and institutions, using cloud technologies.

Features

Proceedings from the 2013 LTEC conference in Kaohsiung, Taiwan. The papers examine diverse aspects of Learning Technology for Education in Cloud environments, including social, technical and infrastructure implications. Also addressed is the question of how cloud computing can be used to design applications to support real time on demand learning using technologies. The workshop proceedings provide [...]

Contents

Section 1: E-learning Case Study.- A Case Study on the Self-efficacy and Online Help Seeking Tendencies of EFL Learners.- Teaching object-oriented programming in first-year undergraduate courses supported by virtual classrooms.- Intelligent Classroom with Motion Sensor and 3D Vision for Virtual Reality e-Learning.- Service Innovation Framework for electronic portfolio appropriation for a technology-based university.- Section 2: E-learning and E-learning Model.- Technological pedagogical content knowledge in pre-service teacher education - research in progress.- A Conceptual Model for [...]

Fields of interest

Computers and Education; Sociology of Education; Complex Networks; Media Research; Database Management

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-94-007-7307-3

Hardcover

2014. XI, 209 p. 35 illus., 31 illus. in color. (Springer Proceedings in Complexity)

\$259.00

ISBN 978-94-007-7307-3

usually dispatched within 3 to 5 business days

L. Uden, Staffordshire University, Stafford, United Kingdom; L.S.L. Wang, J.M. Corchado Rodríguez, Universidad Salamanca, Salamanca, Spain; H.-C. Yang, I.-H. Ting, National University of Kaohsiung, Kaohsiung, Taiwan (Eds.)

The 8th International Conference on Knowledge Management in Organizations

Social and Big Data Computing for Knowledge Management

The proceedings from the eighth KMO conference represent the findings of this international meeting which brought together researchers and developers from industry and the academic world to report on the latest scientific and technical advances on knowledge management in organizations. This conference provided an international forum for authors to present and discuss research focused on the role of knowledge management for innovative services in industries, to shed light on recent advances in social and big data computing for KM as well as to identify future directions for researching the role of knowledge management in service innovation and how cloud computing can be used to [...]

Features

The proceedings from the eighth KMO conference represent the findings of this international meeting which brought together researchers and developers from industry and the academic world to report on the latest scientific and technical advances on knowledge management in organizations. This conference provided an international forum for authors to present and discuss research focused on the role of [...]

Contents

Section 1: Service and Innovation.- Servitization of Business: An Exploratory Case Study of Customer Perspective.- A Service Field Concept for Service Value Creation.- Development of future center: a case study.- Co-creation value platform based on user's behaviour to increase the user engagement.- Inquest for Competitive Factors of Restaurant Information Services.- Cocreation and Implementing ITIL Service Management in the Cloud: A Case Study.- An Ontology-based Advise ment Approach for SOA Design Patterns.- Creating Collaborative Innovative Environment through Knowledge Management in [...]

Fields of interest

Computer Appl. in Administrative Data Processing; Organization / Planning; Data Mining and Knowledge Discovery; Complex Networks; Communications Engineering, Networks

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-94-007-7286-1

Hardcover

2014. XIV, 629 p. 145 illus., 90 illus. in color. (Springer Proceedings in Complexity)

\$349.00

ISBN 978-94-007-7286-1

usually dispatched within 3 to 5 business days

P. Achten, Radboud University Nijmegen, Nijmegen, Netherlands; P. Koopman (Eds.)

The Beauty of Functional Code

Essays Dedicated to Rinus Plasmeijer on the Occasion of His 61st Birthday

This Festschrift has been published in honor of Rinus Plasmeijer, to celebrate the combined occasion of his 61st birthday and the 25th Symposium on Implementation and Application of Functional Languages, IFL 2013, held in Nijmegen, The Netherlands, in August 2013. Rinus Plasmeijer was the main designer of the lazy functional programming language "Clean" and has always been the leader of the associated research team. He has played a decisive role in making the Radboud University of Nijmegen an important center of research in functional programming by organizing and hosting the first few IFL symposia in Nijmegen. This Festschrift contains 19 scientific essays written by former PhD [...]

Features

This Festschrift has been published in honor of Rinus Plasmeijer, to celebrate the combined occasion of his 61st birthday and the 25th Symposium on Implementation and Application of Functional Languages, IFL 2013, held in Nijmegen, The Netherlands, in August 2013. Rinus Plasmeijer was the main designer of the lazy functional programming language "Clean" and has always been the leader of the associated research [...]

Contents

Beautiful Code, Beautiful Proof?.- Beauty and Code.- An Ontology of States.- Functional Type Assignment for Featherweight Java: (To Rinus Plasmeijer, in Honour of His 61st Birthday).- Verifying Functional Formalizations – A Type-Theoretical Case Study in PVS.- Functional Semantics.- Why Functional Programming Matters to Me.- Clocks for Functional Programs.- Declarative Natural Language Specifications.- Clean Up the Web!: (Rapid Client-Side Web Development with Clean).- A Duality of Sorts.- Programming in the λ -Calculus: From Church to Scott and Back.- Modelling Unique and Affine Typing [...]

Fields of interest

Programming Techniques; Programming Languages, Compilers, Interpreters; Mathematical Logic and Formal Languages

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40354-5

Softcover

2013. XIV, 285 p. 31 illus. (Programming and Software Engineering, Vol. 8106)

\$72.00

ISBN 978-3-642-40354-5

usually dispatched within 3 to 5 business days

I. Cervasato, Carnegie Mellon University, Doha, Qatar

The Deductive Spreadsheet

This book describes recent multidisciplinary research at the confluence of the fields of logic programming, database theory and human-computer interaction. The goal of this effort was to develop the basis of a deductive spreadsheet, a user productivity application that allows users without formal training in computer science to make decisions about generic data in the same simple way they currently use spreadsheets to make decisions about numerical data. The result is an elegant design supported by the most recent developments in the above disciplines. The first half of the book focuses on the deductive engine that underlies this application, the foundations that users do not see. [...]

Features

This book describes recent multidisciplinary research at the confluence of the fields of logic programming, database theory and human-computer interaction. The goal of this effort was to develop the basis of a deductive spreadsheet, a user productivity application that allows users without formal training in computer science to make decisions about generic data in the same simple way they currently use [...]

Contents

Chap. 1 Introduction.- Chap. 2 Requirements.- Part I. Deductive Engine.- Chap. 3 The Traditional Spreadsheet.- Chap. 4 The Relational Spreadsheet.- Chap. 5 The Logical Spreadsheet.- Chap. 6 The Deductive Spreadsheet.- Part II. User Interface 184.- Chap. 7 The Traditional Interface.- Chap. 8 Cognitive Interface Design.- Chap. 9 Toward a Deductive Interface.- Chap. 10 Preliminary Experiments.- Chap. 11 Future Developments.

Fields of interest

Information Systems and Communication Service; Artificial Intelligence (incl. Robotics); Programming Techniques; Business Information Systems; Computer Appl. in Administrative Data Processing

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-37746-4

Hardcover

2013. XXI, 406 p. 98 illus. (Cognitive Technologies)

\$129.00

ISBN 978-3-642-37746-4

usually dispatched within 3 to 5 business days

H. Alani, The Open University, Milton Keynes, United Kingdom; L. Kagal, Massachusetts Institute of Technology, Massachusetts, USA; A. Fokoue, IBM Research, Hawthorne, USA; P. Groth, VU University of Amsterdam, Amsterdam, Netherlands; C. Biemann, J.X. Parreira, DERI, NUI Galway, Galway, Ireland; L. Aroyo, Vrije Universiteit, Amsterdam, Netherlands; N. Noy, Stanford University, Stanford, USA; C. Welty, IBM Research, Yorktown Heights, USA; K. Janowicz, University of California, Santa Barbara, USA (Eds.)

The Semantic Web - ISWC 2013

12th International Semantic Web Conference, Sydney, NSW, Australia, October 21-25, 2013, Proceedings, Part I

The two-volume set LNCS 8218 and 8219 constitutes the refereed proceedings of the 12th International Semantic Web Conference, ISWC 2013, held in Sydney, Australia, in October 2013. The International Semantic Web Conference is the premier forum for Semantic Web research, where cutting edge scientific results and technological innovations are presented, where problems and solutions are discussed, and where the future of this vision is being developed. It brings together specialists in fields such as artificial intelligence, databases, social networks, distributed computing, Web engineering, information systems, human-computer interaction, natural language processing, and the social[...]

Features

The two-volume set LNCS 8218 and 8219 constitutes the refereed proceedings of the 12th International Semantic Web Conference, ISWC 2013, held in Sydney, Australia, in October 2013. The International Semantic Web Conference is the premier forum for Semantic Web research, where cutting edge scientific results and technological innovations are presented, where problems and solutions are discussed, and where the [...]

Contents

TRM – Learning Dependencies between Text and Structure with Topical Relational Models.- A Confidentiality Model for Ontologies.- Pattern Based Knowledge Base Enrichment.- Controlled Query Evaluation over OWL 2 RL Ontologies.- Completeness Statements about RDF Data Sources and Their Use for Query Answering.- Empirical Study of Logic-Based Modules: Cheap Is Cheerful.- The Logic of Extensional RDFS.- Indented Tree or Graph? A Usability Study of Ontology Visualization Techniques in the Context of Class Mapping Evaluation.- Real-Time RDF Extraction from Unstructured Data Streams.- One[...]

Fields of interest

Artificial Intelligence (incl. Robotics); Database Management; Information Storage and Retrieval; Document Preparation and Text Processing

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41334-6

Softcover

2013. XXII, 740 p. 181 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8218)

\$131.00

ISBN 978-3-642-41334-6

usually dispatched within 3 to 5 business days

H. Alani, The Open University, Milton Keynes, United Kingdom; L. Kagal, Massachusetts Institute of Technology, Massachusetts, USA; A. Fokoue, IBM Research, Hawthorne, USA; P. Groth, VU University of Amsterdam, Amsterdam, Netherlands; C. Biemann, J.X. Parreira, DERI, NUI Galway, Galway, Ireland; L. Aroyo, Vrije Universiteit, Amsterdam, Netherlands; N. Noy, Stanford University, Stanford, USA; C. Welty, IBM Research, Yorktown Heights, USA; K. Janowicz, University of California, Santa Barbara, USA (Eds.)

The Semantic Web - ISWC 2013

12th International Semantic Web Conference, Sydney, NSW, Australia, October 21-25, 2013, Proceedings, Part II

The two-volume set LNCS 8218 and 8219 constitutes the refereed proceedings of the 12th International Semantic Web Conference, ISWC 2013, held in Sydney, Australia, in October 2013. The International Semantic Web Conference is the premier forum for Semantic Web research, where cutting edge scientific results and technological innovations are presented, where problems and solutions are discussed, and where the future of this vision is being developed. It brings together specialists in fields such as artificial intelligence, databases, social networks, distributed computing, Web engineering, information systems, human-computer interaction, natural language processing, and the social[...]

Features

The two-volume set LNCS 8218 and 8219 constitutes the refereed proceedings of the 12th International Semantic Web Conference, ISWC 2013, held in Sydney, Australia, in October 2013. The International Semantic Web Conference is the premier forum for Semantic Web research, where cutting edge scientific results and technological innovations are presented, where problems and solutions are discussed, and where the [...]

Contents

Social Listening of City Scale Events Using the Streaming Linked Data.- Deployment of RDFa, Microdata, and Microformats on the Web – A Quantitative Analysis.- Entity Recommendations in Web.- The Energy Management Adviser at EDF.- Incorporating Commercial and Private Data into an Open Linked Data Platform for Drug Discovery.- When History Matters - Assessing Reliability for the Reuse of Scientific Workflows.- Integrating NLP Using Linked Data.- A Linked-Data-Driven and Semantically-Enabled Journal Portal for Scientometrics.- Cross-Language Semantic Retrieval and Linking of E-Gov.- Using[...]

Fields of interest

Artificial Intelligence (incl. Robotics); Database Management; Information Storage and Retrieval; Document Preparation and Text Processing

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41337-7

Softcover

2013. XXII, 468 p. 135 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8219)

\$95.00

ISBN 978-3-642-41337-7

usually dispatched within 3 to 5 business days

P. Cimiano, Universität Bielefeld, Bielefeld, Germany; M. Fernández, Open University, Milton Keynes, United Kingdom; V. Lopez, IBM Research - Ireland, Dublin, Ireland; S. Schlobach, VU University of Amsterdam, Amsterdam, Netherlands; J. Völker, University of Mannheim, Mannheim, Germany (Eds.)

The Semantic Web: ESWC 2013 Satellite Events

ESWC 2013, Satellite Events, Montpellier, France, May 26-30, 2013, Revised Selected Papers

This book constitutes the thoroughly refereed post-proceedings of the satellite events of the 10th International Conference on the Semantic Web, ESWC 2013, held in Montpellier, France, in May 2013. The volume contains 44 papers describing the posters and demonstrations, 10 best workshop papers selected from various submissions and four papers of the AI Mashup Challenge. The papers cover various aspects on the Semantic Web.

Features

This book constitutes the thoroughly refereed post-proceedings of the satellite events of the 10th International Conference on the Semantic Web, ESWC 2013, held in Montpellier, France, in May 2013. The volume contains 44 papers describing the posters and demonstrations, 10 best workshop papers selected from various submissions and four papers of the AI Mashup Challenge. The papers cover various aspects on the [...]

Contents

The volume contains 44 papers describing the posters and demonstrations, 10 best workshop papers selected from various submissions and four papers of the AI Mashup Challenge. The papers cover various aspects on the Semantic Web.

Fields of interest

Information Storage and Retrieval; Artificial Intelligence (incl. Robotics); Database Management

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41241-7

Softcover

2013. XXII, 347 p. 102 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 7955)

\$83.00

ISBN 978-3-642-41241-7

usually dispatched within 3 to 5 business days

J. Li, University of South Australia, Adelaide, Australia; L. Cao, University of Technology, Sydney, Australia; C. Wang, University of Technology, Sydney, Australia; K.C. Tan, National University of Singapore, Singapore, Singapore; B. Liu, J. Pei, Simon Fraser University, Burnaby, Canada; V.S. Tseng, National Cheng Kung University, Tainan City, Taiwan (Eds.)

Trends and Applications in Knowledge Discovery and Data Mining

PAKDD 2013 Workshops: DMApps, DANTh, QIMIE, BDM, CDA, CloudSD, Golden Coast, QLD, Australia, Revised Selected Papers

This book constitutes the refereed proceedings at PAKDD Workshops 2013, affiliated with the 17th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD) held in Gold Coast, Australia in April 2013. The 47 revised full papers presented were carefully reviewed and selected from 92 submissions. The workshops affiliated with PAKDD 2013 include: Data Mining Applications in Industry and Government (DMApps), Data Analytics for Targeted Healthcare (DANTh), Quality Issues, Measures of Interestingness and Evaluation of Data Mining Models (QIMIE), Biologically Inspired Techniques for Data Mining (BDM), Constraint Discovery and Application (CDA), Cloud Service Discovery (CloudSD).

Features

This book constitutes the refereed proceedings at PAKDD Workshops 2013, affiliated with the 17th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD) held in Gold Coast, Australia in April 2013. The 47 revised full papers presented were carefully reviewed and selected from 92 submissions. The workshops affiliated with PAKDD 2013 include: Data Mining Applications in Industry and Government [...]

Contents

Data Mining Applications in Industry and Government.- Data Analytics for Targeted Healthcare.- Quality Issues, Measures of Interestingness and Evaluation of Data Mining Models.- Biological Inspired Techniques for Data Mining.- Constraint Discovery and Cloud Service Discovery.

Fields of interest

Data Mining and Knowledge Discovery; Artificial Intelligence (incl. Robotics); Health Informatics; Information Storage and Retrieval; Information Systems Applications (incl. Internet)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40318-7

Softcover

2013. XVIII, 556 p. 152 illus. (Lecture Notes in Artificial Intelligence, Vol. 7867)

\$131.00

ISBN 978-3-642-40318-7

usually dispatched within 3 to 5 business days

C. Palamidessi, École Polytechnique, Palaiseau CX, France; M.D. Ryan (Eds.)

Trustworthy Global Computing

7th International Symposium, TGC 2012, Newcastle upon Tyne, UK, September 7-8, 2012, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 7th International Symposium on Trustworthy Global Computing, TGC 2012, held in Newcastle upon Tyne, UK, in September 2012. The 9 revised full papers presented together with 3 invited talks were carefully reviewed and selected from 14 submissions. The papers cover a wide range of topics in the area of global computing and reliable computation in the so-called global computers, i.e., those computational abstractions emerging in large-scale infrastructures such as service-oriented architectures, autonomic systems and cloud computing, providing frameworks, tools, algorithms and protocols for designing[...]

Features

This book constitutes the thoroughly refereed post-conference proceedings of the 7th International Symposium on Trustworthy Global Computing, TGC 2012, held in Newcastle upon Tyne, UK, in September 2012. The 9 revised full papers presented together with 3 invited talks were carefully reviewed and selected from 14 submissions. The papers cover a wide range of topics in the area of global computing and reliable [...]

Contents

From Rational Number Reconstruction to Set Reconciliation and File Synchronization.- Affine Refinement Types for Authentication and Authorization.- Seamless Distributed Computing from the Geometry of Interaction.- A Beginner's Guide to the DeadLock Analysis Model.- Formal Modeling and Reasoning about the Android Security Framework.- A Type System for Flexible Role Assignment in Multiparty Communicating Systems.- A Multiparty Multi-session Logic.- LTS Semantics for Compensation-Based Processes.- Linking Unlinkability.- Towards Quantitative Analysis of Opacity.- An Algebra for Symbolic[...]

Fields of interest

Data Encryption; Computer Communication Networks; Management of Computing and Information Systems; Algorithm Analysis and Problem Complexity; Software Engineering; Coding and Information Theory

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41156-4

Softcover

2013. X, 213 p. 37 illus. (Theoretical Computer Science and General Issues, Vol. 8191)

\$72.00

ISBN 978-3-642-41156-4

usually dispatched within 3 to 5 business days

M. Childs, Coventry University, Coventry, United Kingdom; A. Peachey (Eds.)

Understanding Learning in Virtual Worlds

Since the publication of the companion volume Researching Learning in Virtual Worlds in 2010, there has been a growth not only in the range and number of educational initiatives taking place in virtual worlds, but also in the depth of analysis of the nature of that education. Understanding Learning in Virtual Worlds reflects those changes through a collection of chapters that are extended versions of research presented at the second Researching Learning in Virtual Environments conference (ReLIVE 11), an international conference hosted by the Open University UK. Included in this book are chapters that explore the philosophical and methodological underpinnings of understanding learning[...]

Features

Since the publication of the companion volume Researching Learning in Virtual Worlds in 2010, there has been a growth not only in the range and number of educational initiatives taking place in virtual worlds, but also in the depth of analysis of the nature of that education. Understanding Learning in Virtual Worlds reflects those changes through a collection of chapters that are extended [...]

Contents

Editors' Introduction.- An Alternative (to) Reality.- Guidelines for Conducting Text Based Interviews in Virtual Worlds.- Designing for Hybrid Learning Environments in a Science Museum: Inter-professional Conceptualisations of Space.- An Examination of Student Engagement, Knowledge Creation and Expansive Learning in a Virtual World.- The Strength of Cohesive Ties: Discursive Construction of an Online Learning Community.- +SPACES: Serious Games for Role-Playing Government Policies.- Avatars, Art and Aspirations: The Creative Potential for Learning in the Virtual World.- Second Language[...]

Fields of interest

User Interfaces and Human Computer Interaction; Computers and Education; Educational Technology; Computer Appl. in Social and Behavioral Sciences; Computer Appl. in Arts and Humanities; Ontology

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4471-5369-6

Hardcover

2013. XXII, 179 p. 39 illus., 36 illus. in color. (Human-Computer Interaction Series)

\$109.00

ISBN 978-1-4471-5369-6

usually dispatched within 3 to 5 business days

D. Geronimo, Universitat Autònoma de Barcelona, Bellaterra, Spain; A.M. Lopez, Universitat Autònoma de Barcelona, Bellaterra, Spain

Vision-based Pedestrian Protection Systems for Intelligent Vehicles

Pedestrian Protection Systems (PPSs) are on-board systems aimed at detecting and tracking people in the surroundings of a vehicle in order to avoid potentially dangerous situations. These systems, together with other Advanced Driver Assistance Systems (ADAS) such as lane departure warning or adaptive cruise control, are one of the most promising ways to improve traffic safety. By the use of computer vision, cameras working either in the visible or infra-red spectra have been demonstrated as a reliable sensor to perform this task. Nevertheless, the variability of human's appearance, not only in terms of clothing and sizes but also as a result of their dynamic shape, makes pedestrians[...]

Features

Pedestrian Protection Systems (PPSs) are on-board systems aimed at detecting and tracking people in the surroundings of a vehicle in order to avoid potentially dangerous situations. These systems, together with other Advanced Driver Assistance Systems (ADAS) such as lane departure warning or adaptive cruise control, are one of the most promising ways to improve traffic safety. By the use of computer vision, [...]

Contents

1. Introduction.- 2. Candidates Generation.- 3. Classification.- 4. Completing the System.- 5. Datasets and Benchmarking.- 6. Conclusions.

Fields of interest

Computer Imaging, Vision, Pattern Recognition and Graphics; Signal, Image and Speech Processing

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-7986-4

Softcover

2014. X, 114 p. 42 illus. (SpringerBriefs in Computer Science)

\$39.99

ISBN 978-1-4614-7986-4

usually dispatched within 3 to 5 business days

S. Ceri, Politecnico di Milano, Milan, Italy; A. Bozzon, Politecnico di Milano, Milan, Italy; M. Brambilla, Politecnico di Milano, Milan, Italy; E. Della Valle, Politecnico di Milano, Milan, Italy; P. Fraternali, Politecnico di Milano, Milan, Italy; S. Quarteroni, Politecnico di Milano, Milan, Italy

Web Information Retrieval

With the proliferation of huge amounts of (heterogeneous) data on the Web, the importance of information retrieval (IR) has grown considerably over the last few years. Big players in the computer industry, such as Google, Microsoft and Yahoo!, are the primary contributors of technology for fast access to Web-based information; and searching capabilities are now integrated into most information systems, ranging from business management software and customer relationship systems to social networks and mobile phone applications. Ceri and his co-authors aim at taking their readers from the foundations of modern information retrieval to the most advanced challenges of Web IR. To this end,[...]

Features

With the proliferation of huge amounts of (heterogeneous) data on the Web, the importance of information retrieval (IR) has grown considerably over the last few years. Big players in the computer industry, such as Google, Microsoft and Yahoo!, are the primary contributors of technology for fast access to Web-based information; and searching capabilities are now integrated into most information systems, [...]

Contents

Part I Principles of Information Retrieval.- An Introduction to Information Retrieval.- The Information Retrieval Process.- Information Retrieval Models.- Classification and Clustering.- Natural Language Processing for Search.- Part II Information Retrieval for the Web.- Search Engines.- Link Analysis.- Recommendation and Diversification for the Web.- Advertising in Search.- Part III Advanced Aspects of Web Search.- Publishing Data on the Web.- Meta-Search and Multi-Domain Search.- Semantic Search.- Multimedia Search.- Search Process and Interfaces.- Human Computation and Crowd Search.

Fields of interest

Information Storage and Retrieval; Artificial Intelligence (incl. Robotics); Probability and Statistics in Computer Science; e-commerce / e-business

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-3-642-39313-6

Hardcover

2013. XIV, 284 p. 113 illus., 3 illus. in color. (Data-Centric Systems and Applications)

\$69.99

ISBN 978-3-642-39313-6

usually dispatched within 3 to 5 business days

X. Lin, The University of New South Wales, Sydney, Australia; Y. Manolopoulos, Aristotle University of Thessaloniki, Thessaloniki, Greece; D. Srivastava, AT&T Labs-Research, Florham Park, USA; G. Huang, Victoria University, Melbourne, Australia (Eds.)

Web Information Systems Engineering -- WISE 2013

14th International Conference, Nanjing, China, October 13-15, 2013, Proceedings, Part I

This book constitutes the proceedings of the 14th International Conference on Web Information Systems Engineering, WISE 2013, held in Nanjing, China, in October 2013. The 48 full papers, 29 short papers, and 10 demo and 5 challenge papers, presented in the two-volume proceedings LNCS 8180 and 8181, were carefully reviewed and selected from 198 submissions. They are organized in topical sections named: Web mining; Web recommendation; Web services; data engineering and database; semi-structured data and modeling; Web data integration and hidden Web; challenge; social Web; information extraction and multilingual management; networks, graphs and Web-based business processes; event[...]

Features

This book constitutes the proceedings of the 14th International Conference on Web Information Systems Engineering, WISE 2013, held in Nanjing, China, in October 2013. The 48 full papers, 29 short papers, and 10 demo and 5 challenge papers, presented in the two-volume proceedings LNCS 8180 and 8181, were carefully reviewed and selected from 198 submissions. They are organized in topical sections named: Web [...]

Contents

Entity Correspondence with Second-Order Markov Logic.- Learning Social Relationship Strength via Matrix Co-Factorization with Multiple Kernels.- NEXIR: A Novel Web Extraction Rule Language toward a Three-Stage Web Data Extraction Model.- Heterogeneous Metric Learning for Cross-Modal Multimedia Retrieval.- Efficient Online Novelty Detection in News Streams.- Detecting Opinion Drift from Chinese Web Comments Based on Sentiment Distribution Computing.- Feature Extraction from Micro-blogs for Comparison of Products and Services.- Directional Context Helps: Guiding Semantic Relatedness[...]

Fields of interest

Information Systems Applications (incl. Internet); Information Systems and Communication Service; Software Engineering; Data Mining and Knowledge Discovery

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41229-5

Softcover

2013. XXVIII, 526 p. 174 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8180)

\$107.00

ISBN 978-3-642-41229-5

usually dispatched within 3 to 5 business days

X. Lin, The University of New South Wales, Sydney, Australia; Y. Manolopoulos, Aristotle University of Thessaloniki, Thessaloniki, Greece; D. Srivastava, AT&T Labs-Research, Florham Park, USA; G. Huang, Victoria University, Melbourne, Australia (Eds.)

Web Information Systems Engineering -- WISE 2013

14th International Conference, Nanjing, China, October 13-15, 2013, Proceedings, Part II

This book constitutes the proceedings of the 14th International Conference on Web Information Systems Engineering, WISE 2013, held in Nanjing, China, in October 2013. The 48 full papers, 29 short papers, and 10 demo and 5 challenge papers, presented in the two-volume proceedings LNCS 8180 and 8181, were carefully reviewed and selected from 198 submissions. They are organized in topical sections named: Web mining; Web recommendation; Web services; data engineering and database; semi-structured data and modeling; Web data integration and hidden Web; challenge; social Web; information extraction and multilingual management; networks, graphs and Web-based business processes; event[...]

Features

This book constitutes the proceedings of the 14th International Conference on Web Information Systems Engineering, WISE 2013, held in Nanjing, China, in October 2013. The 48 full papers, 29 short papers, and 10 demo and 5 challenge papers, presented in the two-volume proceedings LNCS 8180 and 8181, were carefully reviewed and selected from 198 submissions. They are organized in topical sections named: Web [...]

Contents

An Evaluation of Aggregation Techniques in Crowdsourcing.- Propagated Opinion Retrieval in Twitter.- Diversifying Tag Selection Result for Tag Clouds by Enhancing both Coverage and Dissimilarity.- Community Detection in Multi-relational Social Networks.- Community Detection in Social Media by Leveraging Interactions and Intensities.- A Novel and Model Independent Approach for Efficient Influence Maximization in Social Networks.- iPLUG: Personalized List Recommendation in Twitter.- The Irreducible Spine(s) of Undirected Networks.- SocWeb: Efficient Monitoring of Social Network[...]

Fields of interest

Information Systems Applications (incl.Internet); Information Systems and Communication Service; Software Engineering; Data Mining and Knowledge Discovery

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41153-3

Softcover

2013. XXVIII, 542 p. 189 illus. (Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 8181)

\$107.00

ISBN 978-3-642-41153-3

usually dispatched within 3 to 5 business days

A. Bouguettaya, Q.Z. Sheng, F. Daniel (Eds.)

Web Services Foundations

Web services and Service-Oriented Computing (SOC) have become thriving areas of academic research, joint university/industry research projects, and novel IT products on the market. SOC is the computing paradigm that uses Web services as building blocks for the engineering of composite, distributed applications out of the reusable application logic encapsulated by Web services. Web services could be considered the best-known and most standardized technology in use today for distributed computing over the Internet. Web Services Foundations is the first installment of a two-book collection covering the state-of-the-art of both theoretical and practical aspects of Web services and SOC[...]

Features

Web services and Service-Oriented Computing (SOC) have become thriving areas of academic research, joint university/industry research projects, and novel IT products on the market. SOC is the computing paradigm that uses Web services as building blocks for the engineering of composite, distributed applications out of the reusable application logic encapsulated by Web services. Web services could be considered [...]

Contents

Web Services and Business Processes: A Round Trip.- RESTful Web Services: Principles, Patterns, Emerging Technologies.- Conceptual Design of Sound, Custom Composition Languages.- Service-Oriented Programming with Jolie.- From Artifacts to Activities.- On the Composability of Semantic Web Service.- Semantic Web Service Composition: the Web Service Challenge Perspective.- Automated Service Composition Based on Behaviors: The Roman Model.- Behavioral Service Substitution.- Web Service Adaptation: Mismatch Patterns and Semi-Automated Approach to Mismatch Identification and Adapter[...]

Fields of interest

Information Systems Applications (incl.Internet); Database Management; Information Storage and Retrieval; Computer Communication Networks; Computer Applications

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7517-0

Hardcover

2014. XIX, 739 p. 205 illus.

\$189.00

ISBN 978-1-4614-7517-0

usually dispatched within 3 to 5 business days

L. Chen, Sam Houston State University, Huntsville, USA; J. Ji, Sam Houston State University, Huntsville, USA; Z. Zhang (Eds.)

Wireless Network Security

Theories and Applications

Wireless Network Security Theories and Applications discusses the relevant security technologies, vulnerabilities, and potential threats, and introduces the corresponding security standards and protocols, as well as provides solutions to security concerns. Authors of each chapter in this book, mostly top researchers in relevant research fields in the U.S. and China, presented their research findings and results about the security of the following types of wireless networks: Wireless Cellular Networks, Wireless Local Area Networks (WLANs), Wireless Metropolitan Area Networks (WMANs), Bluetooth Networks and Communications, Vehicular Ad Hoc Networks (VANETs), Wireless Sensor Networks[...]

Features

Wireless Network Security Theories and Applications discusses the relevant security technologies, vulnerabilities, and potential threats, and introduces the corresponding security standards and protocols, as well as provides solutions to security concerns. Authors of each chapter in this book, mostly top researchers in relevant research fields in the U.S. and China, presented their research findings and [...]

Contents

Challenges in Wireless Network Security.- Security in Centralized Wireless Networks.- Security in Decentralized Wireless Networks.- Security in Hybrid Wireless Networks.

Fields of interest

Computer Communication Networks; Data Encryption; Communications Engineering, Networks

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-36510-2

Distribution rights in China: Higher Education Press

Hardcover

Jointly published with Higher Education Press

2013. X, 274 p.

\$129.00

ISBN 978-3-642-36510-2

Due: November 28, 2013

F.K. Shaikh, B.S. Chowdhry, Mehran University of Engineering & Tech, Jamshoro, Pakistan; H.M. Ammari, University of Michigan-Dearborn, Dearborn, USA; M.A. Uqaili, Mehran University of Engineering, Jamshoro, Pakistan; A. Shah, International Islamic University, Petaling Jaya, Malaysia (Eds.)

Wireless Sensor Networks for Developing Countries

First International Conference, WSN4DC 2013, Jamshoro, Pakistan, April 24-26, 2013, Revised Selected Papers

This book constitutes the refereed proceedings of the First International Conference on Wireless Sensor Networks for Developing Countries, WSN4DC 2013, held in Jamshoro, Pakistan, in April 2013. The 10 revised full papers presented were carefully reviewed and selected from 30 submissions. The papers are organized in topical sections on WSN applications/services for developing countries; mobile WSN; underwater WSN; VANETS; body area networks; energy harvesting in WSN; WSN and cloud integration; WSN and IoT; QoS and Qot; WSN MAC, network and transport protocols; cross layer approaches; security aspects in WSN; WSN applications in smart grid and energy management; WSN in structural[...]

Features

This book constitutes the refereed proceedings of the First International Conference on Wireless Sensor Networks for Developing Countries, WSN4DC 2013, held in Jamshoro, Pakistan, in April 2013. The 10 revised full papers presented were carefully reviewed and selected from 30 submissions. The papers are organized in topical sections on WSN applications/services for developing countries; mobile WSN; underwater[...]

Contents

WSN applications/services for developing countries.- Mobile WSN.- Underwater WSN.- VANETS.- Body area networks.- Energy harvesting in WSN.- WSN and cloud integration.- WSN and IoT.- QoS and Qot.- WSN MAC, network and transport protocols.- Cross layer approaches.- Security aspects in WSN.- WSN applications in smart grid and energy management.- WSN in structural health monitoring.

Fields of interest

Computer Communication Networks; Artificial Intelligence (incl. Robotics); Information Systems Applications (incl. Internet); Algorithm Analysis and Problem Complexity; Information Storage and Retrieval; Software Engineering

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-41053-6

Softcover

2013. XIV, 121 p. 56 illus. (Communications in Computer and Information Science, Vol. 366)

\$84.00

ISBN 978-3-642-41053-6

usually dispatched within 3 to 5 business days

H. Wen, P.K. Tiwary, T. Le-Ngoc, McGill University, Montreal, Canada

Wireless Virtualization

This SpringerBriefs is an overview of the emerging field of wireless access and mobile network virtualization. It provides a clear and relevant picture of the current virtualization trends in wireless technologies by summarizing and comparing different architectures, techniques and technologies applicable to a future virtualized wireless network infrastructure. The readers are exposed to a short walkthrough of the future Internet initiative and network virtualization technologies in order to understand the potential role of wireless virtualization in the broader context of next-generation ubiquitous networks. Three main wireless virtualization perspectives are explored, along with the[...]

Features

This SpringerBriefs is an overview of the emerging field of wireless access and mobile network virtualization. It provides a clear and relevant picture of the current virtualization trends in wireless technologies by summarizing and comparing different architectures, techniques and technologies applicable to a future virtualized wireless network infrastructure. The readers are exposed to a short walkthrough of [...]

Contents

Introduction.- Network Virtualization: Overview.- Network and Infrastructure Virtualization Architectures.- Network Virtualization Technologies and Techniques.- Wireless Virtualization.- Framework for Wireless Virtualization.

Fields of interest

Computer Communication Networks; Multimedia Information Systems; Information Systems Applications (incl. Internet); Communications Engineering, Networks

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-01290-2

Softcover

2013. XIV, 112 p. 42 illus. (SpringerBriefs in Computer Science)

\$54.99

ISBN 978-3-319-01290-2

usually dispatched within 3 to 5 business days

Earth Sciences

M.A. Sokolovskiy, Water Problems Institute, Moscow, Russian Federation; J. Verron, MEOM/LGGE, St Martin d'Hères, France

Dynamics of Vortex Structures in a Stratified Rotating Fluid

This book presents an extensive analysis of the dynamics of discrete and distributed baroclinic vortices in a multi-layer fluid that characterizes the main features of the large and mesoscales dynamics of the atmosphere and the ocean. It widely covers the case of hetonic situations as well as the case of intrathermocline vortices that are familiar in oceanographic and of recognized importance for heat and mass transfers. Extensive typology of such baroclinic eddies is made and analysed with the help of theoretical development and numerical computations. As a whole it gives an overview and synthesis of all the many situations that can be encountered based on the long history of the[...]

Features

This book presents an extensive analysis of the dynamics of discrete and distributed baroclinic vortices in a multi-layer fluid that characterizes the main features of the large and mesoscales dynamics of the atmosphere and the ocean. It widely covers the case of hetonic situations as well as the case of intrathermocline vortices that are familiar in oceanographic and of recognized importance for heat and mass [...]

Contents

The Introductory Chapter.- Dynamics of Discrete Vortices.- Dynamics of Finite-core Vortices.- The Concluding Chapter.

Fields of interest

Oceanography; Atmospheric Sciences; Fluid- and Aerodynamics; Nonlinear Dynamics; Math. Appl. in Environmental Science

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00788-5

Hardcover

2014. XII, 382 p. 256 illus., 179 illus. in color. (Atmospheric and Oceanographic Sciences Library, Vol. 47)

\$179.00

ISBN 978-3-319-00788-5

Due: October 28, 2013

E. Wolanski, James Cook University, Townsville, Australia (Ed.)

A. Miall, University of Toronto, Toronto, Canada

K. Hewitt, Wilfrid Laurier University, Waterloo, Canada

Estuaries of Australia in 2050 and beyond

The book addresses the questions: Is Australia's rapidly growing human population and economy environmentally sustainable for its estuaries and coasts? What is needed to enable sustainable development? To answer these questions, this book reports detailed studies of 20 iconic Australian estuaries and bays by leading Australian estuarine scientists. That knowledge is synthesised in time and space across Australia to suggest what Australian estuaries will look like in 2050 and beyond based on socio-economic decisions that are made now, and changes that are needed to ensure sustainability. The book also has a Prologue by Mr Malcolm Fraser, former Prime Minister of Australia, which[...]

Features

The book addresses the questions: Is Australia's rapidly growing human population and economy environmentally sustainable for its estuaries and coasts? What is needed to enable sustainable development? To answer these questions, this book reports detailed studies of 20 iconic Australian estuaries and bays by leading Australian estuarine scientists. That knowledge is synthesised in time and [...]

Contents

1. Estuaries of Australia in 2050 and beyond - A synthesis.- PART I - Estuaries that bore the full pressure of the historical developments.- 2. Sydney Estuary, Australia: Geology, anthropogenic development and hydrodynamic processes/attributes.- 3. The Murray/Coorong Estuary. Meeting of the Waters?.- 4. Port Phillip Bay.- 5. The Tamar Estuary, Tasmania.- PART II Estuaries being degraded.- 6. Gold Coast Broadwater: Southern Moreton Bay, Southeast Queensland (Australia).- 7. Hydrodynamics and sediment transport in a macro-tidal estuary: Darwin Harbour, Australia.- 8. The Ord River[...]

Fields of interest

Coastal Sciences; Freshwater & Marine Ecology; Environmental Management; Climate Change; Monitoring / Environmental Analysis; Environmental Health

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7018-8

Hardcover

2014. XVII, 292 p. 108 illus., 59 illus. in color. (Estuaries of the World)

\$129.00

ISBN 978-94-007-7018-8

usually dispatched within 3 to 5 business days

Fluvial Depositional Systems

This book is intended to complement the author's 1996 book "The geology of fluvial deposits", not to replace it. The book summarizes methods of mapping and interpretation of fluvial depositional systems, with a detailed treatment of the tectonic, climatic and eustatic controls on fluvial depositional processes. It focuses on the preserved, ancient depositional record and emphasizes large-scale (basin-scale) depositional processes. Tectonic and climatic controls of fluvial sedimentation and the effects of base-level change on sequence architecture are discussed. Profusely illustrated and with an extensive reference to the recent literature, this book will be welcomed by the student and [...]

Features

The book summarizes methods of mapping and interpretation of fluvial depositional systems, with a detailed treatment of the tectonic, climatic and eustatic controls on fluvial depositional processes. It focuses on the preserved, ancient depositional record and emphasizes large-scale (basin-scale) depositional processes. Tectonic and climatic controls of fluvial sedimentation and the effects of base-level [...]

Contents

Introduction.- The facies and architecture of fluvial systems.- Allogenic sedimentary controls.- Sequence stratigraphy.- Modern depositional systems.- Ancient depositional systems.

Fields of interest

Sedimentology; Historical Geology

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00665-9

Hardcover

2014. IX, 316 p. 232 illus., 105 illus. in color. (Springer Geology)

\$129.00

ISBN 978-3-319-00665-9

usually dispatched within 3 to 5 business days

Glaciers of the Karakoram Himalaya

Glacial Environments, Processes, Hazards and Resources

The Karakoram contains the greatest concentration of glaciers and most of the largest ice masses outside high latitudes. They comprise major stores and sources of fresh water in an otherwise extreme, continental, dry region. As many as 200 million people living downstream, in the valleys of the Indus and Yarkand Rivers, depend on melt waters from snow and ice. They are at risk from climate-change impacts on glaciers and water supply, and from hazards such as glacial lake outburst floods. Useful research initiatives go back to the nineteenth century, but coverage has generally been limited geographically and has not been continuous over time. It is almost 80 years since a monograph was [...]

Features

The Karakoram contains the greatest concentration of glaciers and most of the largest ice masses outside high latitudes. They comprise major stores and sources of fresh water in an otherwise extreme, continental, dry region. As many as 200 million people living downstream, in the valleys of the Indus and Yarkand Rivers, depend on melt waters from snow and ice. They are at risk from climate-change impacts on [...]

Contents

The Regional Context.- Snow, Ice and Verticality in the Karakoram.- Karakoram Glaciers: Types and Terrain.- Glacier Mass Balance I: Snowfall and Glacier Nourishment.- Glacier Mass Balance II: Ablation.- Mass Balance Regimes.- Dynamics of Snow and Ice in Glacier Basins.- Landforms of the Karakoram and Glacierized Areas.- Surge-Type Glaciers.- Glacial Impoundments and Outburst Floods.- Rock Glaciers and Related Phenomena.- Glaciers and Climate Change.- Glaciers in Human Life.

Fields of interest

Atmospheric Sciences; Climate Change Impacts; Physical Geography

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-6310-4

Hardcover

2014. XX, 363 p. 144 illus., 129 illus. in color. (Advances in Asian Human-Environmental Research)

\$179.00

ISBN 978-94-007-6310-4

usually dispatched within 3 to 5 business days

J.F. Hermance

Historical Variability of Rainfall in the African East Sahel of Sudan

Implications for Development

The northward migration of the African monsoon rains in summer, associated with the seasonal march of the Intertropical Convergence Zone (ITCZ) across the plains south of the Sahara, is the most critical asset for the livelihoods of indigenous peoples and local economies of the Sahel. It is essential that climate science (and its publicly available database) play a key role in characterizing the variabilities of these rainfall patterns in space and time if sustainable life styles are to accommodate the expanding populations of the region. This study turns to the East Sahel of Sudan by analyzing over 100 years of historical rainfall data from three of the few long term standard WMO[...]

Features

The northward migration of the African monsoon rains in summer, associated with the seasonal march of the Intertropical Convergence Zone (ITCZ) across the plains south of the Sahara, is the most critical asset for the livelihoods of indigenous peoples and local economies of the Sahel. It is essential that climate science (and its publicly available database) play a key role in characterizing the [...]

Contents

Introduction.- Analysis of Long Term (100 yr) Patterns of Rainfall Variability.- Interannual and Inter-seasonal Variations in Monthly Rainfall.- Intra-Seasonal Patterns of Rainfall from Daily Values.- Analysis of Storm Events and Interstorm Dry Periods.- Overview and Conclusions.

Fields of interest

Earth System Sciences; Meteorology; Climate Change; Popular Science in Nature and Environment; Geography (general); Environmental Management

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00574-4

Softcover

2014. XI, 123 p. 48 illus., 13 illus. in color. (SpringerBriefs in Earth Sciences)

\$49.99

ISBN 978-3-319-00574-4

usually dispatched within 3 to 5 business days

K. Satake, University of Tokyo, Tokyo, Japan; A.B. Rabinovich, Russian Academy of Sciences, Moscow, Russian Federation; D. Dominey-Howes, The University of Sydney, Sydney, Australia; J.C. Borrero, University of Southern California, Los Angeles, USA (Eds.)

Historical and Recent Catastrophic Tsunamis in the World

Volume I. The 2011 Tohoku Tsunami

The 2011 Tohoku earthquake generated a tsunami that caused severe damage including 20,000 casualties in Japan. The tsunami also affected other Pacific coasts, including the Kuril Islands, the USA, French Polynesia, the Galapagos Islands, Australia, and New Zealand. This volume contains an introduction and 21 papers, mostly presented at the 25th International Tsunami Symposium held 1-4 July 2011, only four months after the tsunami. They report seismological aspects of the event related to the tsunami warning, the tsunami impacts and effects in Japan and around the Pacific, analyses of instrumental tsunami data and modelling.

Features

The 2011 Tohoku earthquake generated a tsunami that caused severe damage including 20,000 casualties in Japan. The tsunami also affected other Pacific coasts, including the Kuril Islands, the USA, French Polynesia, the Galapagos Islands, Australia, and New Zealand. This volume contains an introduction and 21 papers, mostly presented at the 25th International Tsunami Symposium held 1-4 July 2011, only four [...]

Contents

Introduction.- From 3-Hz P waves to OS2: No evidence of a slow component to the source of the 2011 Tohoku earthquake.- On the application of Mwp in the near field and the March 11, 2011 Tohoku earthquake.- Lessons learned from the 2011 Great East Japan tsunami: Performance of tsunami countermeasures, coastal buildings, and tsunami evacuation in Japan.- The 11 March 2011 East Japan earthquake and tsunami: Tsunami effects on coastal infrastructure and buildings.- The 11 March 2011 Tohoku tsunami survey in Rikuzentakata and comparison with historical events.- Salinity in soils and tsunami[...]

Fields of interest

Geotechnical Engineering & Applied Earth Sciences; Oceanography; Coastal Sciences

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-0348-0699-2

Softcover

2013. VI, 405 p. (Pageoph Topical Volumes)

\$74.99

ISBN 978-3-0348-0699-2

usually dispatched within 3 to 5 business days

B. Funk, Institute of Electronic Business Process, Lüneburg, Germany; P. Niemeier, Institute of Electronic Business Process, Lüneburg, Germany; J.M. Gómez, Universität Oldenburg, Oldenburg, Germany (Eds.)

Information Technology in Environmental Engineering

Selected Contributions to the Sixth International Conference on Information Technologies in Environmental Engineering (ITEE2013)

Information technologies have evolved to an enabling science for natural resource management and conservation, environmental engineering, scientific simulation and integrated assessment studies. Computing plays a significant role in the every day practices of environmental engineers, natural scientists, economists, and social scientists. The complexity of natural phenomena requires interdisciplinary approaches, where computing science offers the infrastructure for environmental data collection and management, scientific simulations, decision support, documentation and reporting. Ecology, environmental engineering and natural resource management comprise an excellent real-world test-bed[...]

Features

Information technologies have evolved to an enabling science for natural resource management and conservation, environmental engineering, scientific simulation and integrated assessment studies. Computing plays a significant role in the every day practices of environmental engineers, natural scientists, economists, and social scientists. The complexity of natural phenomena requires interdisciplinary [...]

Contents

Influence of environmental protection requirements on object-oriented software design.- Impact of Design on the Sustainability of mobile Applications.- Investigating the Promotional Effect of Green Signals in Sponsored Search Advertising using Bayesian Parameter Estimation.- Dialogue Maps: Supporting interactive transdisciplinary dialogues with a web-based tool for multi-layer knowledge maps.- The Role of ICT in Green Logistics - A Systematic Literature Review.- Green Big Data - A Green IT / Green IS perspective on Big Data.- Conceptualizing the quantification of the Carbon Footprint[...]

Fields of interest

Environmental Science and Engineering; Monitoring / Environmental Analysis; Information Systems and Communication Service

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-36010-7

Hardcover

2014. VIII, 228 p. 50 illus., 13 illus. in color. (Environmental Engineering)

\$229.00

ISBN 978-3-642-36010-7

usually dispatched within 3 to 5 business days

M. Fort, University Diderot-Sorbonne-Paris-Cité, Paris, France;
M.-F. André, Blaise Pascal University - MSH, Clermont-Ferrand,
France (Eds.)

Landscapes and Landforms of France

The Landforms and Landscapes of France provides an informative and attractive overview of the most scenic landscapes of France. The geodiversity of France is emphasized, for example the glacial landscapes of the Mont-Blanc Massif, the volcanoes of the French Massif Central, the chalk cliffs and sand dunes of the Atlantic coast, the granitic landscapes of Corsica or the lagoons and coral reefs of French Polynesia. The objectives are to provide the reader with an enjoyable and informative description of the selected sites within their regional geographical and geological settings; to offer an up-to-date survey of the evolution of France's landscape; and to give additional information on[...]

Features

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Contents

Foreword.- General introduction to the landscapes and landforms of France.- Paris and the Seine River: antic sites, underground resources, and risks.- The Seine River from Ile de France to Normandy: geomorphological and cultural landscapes of a large meandering valley.- The High Normandy chalk cliffs: an inspiring geomorphosite for painters and novelists.- The Mont-Saint-Michel Bay: an exceptional megatidal environment influenced by natural evolution and man-made modifications.- The "Pink Granite" coast (Northern Brittany).- Another Loire: the Armorican Loire.- The Arcachon Bay[...]

Fields of interest

Geomorphology; Nature Conservation; Physical Geography

Target groups

Graduate

Type of publication

Monograph

More on www.springer.com/978-94-007-7021-8

Hardcover

2014. XIX, 274 p. 230 illus., 172 illus. in color. (World Geomorphological Landscapes)

\$129.00

ISBN 978-94-007-7021-8

Due: October 28, 2013

J.-S. L'Heureux, A. Locat, Laval University, Quebec, Canada; S. Leroueil, D. Demers, J. Locat (Eds.)

Landslides in Sensitive Clays

From Geosciences to Risk Management

Landslides in sensitive clays represent a major hazard in the northern countries of the world such as Canada, Finland, Norway, Russia, Sweden and in the US state of Alaska. Past and recent examples of catastrophic landslides at e.g. Saint-Jean-Vianney in 1971, Rissa in 1979, Finneidfjord in 1996 and Kattmarka in 2009 have illustrated the great mobility of the remolded sensitive clays and their hazardous retrogressive potential. These events call for a better understanding of landslide in sensitive clay terrain to assist authorities with state-of-the-art hazard assessment methods, risk management schemes, mitigation measures and planning. During the last decades the elevated awareness[...]

Features

Landslides in sensitive clays represent a major hazard in the northern countries of the world such as Canada, Finland, Norway, Russia, Sweden and in the US state of Alaska. Past and recent examples of catastrophic landslides at e.g. Saint-Jean-Vianney in 1971, Rissa in 1979, Finneidfjord in 1996 and Kattmarka in 2009 have illustrated the great mobility of the remolded sensitive clays and their hazardous [...]

Contents

Part I: Sensitive clay: source, nature and development.- Part II: Landslide characterization.- Part III: Integrated geotechnical and geophysical site investigations.- Part IV: Slope stability, modelling and progressive failure.- Part V: Hazard assessment, risk management, regulations and policies.

Fields of interest

Natural Hazards; Environmental Science and Engineering; Geotechnical Engineering & Applied Earth Sciences; Geology

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-7078-2

Hardcover

2014. XV, 418 p. 185 illus., 123 illus. in color. (Advances in Natural and Technological Hazards Research, Vol. 36)

\$179.00

ISBN 978-94-007-7078-2

usually dispatched within 3 to 5 business days

U.C. Mohanty, Indian Institute of Technology, Delhi, India; M. Mohapatra, India Meteorological Department, New Delhi, India; O.P. Singh, India Meteorological Department, New Delhi, India; B.K. Bandyopadhyay, India Meteorological Department, New Delhi, India; L.S. Rathore, India Meteorological Department, New Delhi, India (Eds.)

Monitoring and Prediction of Tropical Cyclones in the Indian Ocean and Climate Change

This book deals with recent advances in our understanding and prediction of tropical cyclogenesis, intensification and movement as well as landfall processes like heavy rainfall, gale wind and storm surge based on the latest observational and numerical weather prediction (NWP) modeling platforms. It also includes tropical cyclone (TC) management issues like early warning systems, recent high impact TC events, disaster preparedness, assessment of risk and vulnerability including construction, archiving and retrieval of the best tracking and historical data sets, policy decision etc., in view of recent findings on climate change aspects and their impact on TC activity. The chapters are[...]

Features

This book deals with recent advances in our understanding and prediction of tropical cyclogenesis, intensification and movement as well as landfall processes like heavy rainfall, gale wind and storm surge based on the latest observational and numerical weather prediction (NWP) modeling platforms. It also includes tropical cyclone (TC) management issues like early warning systems, recent high impact TC [...]

Contents

Construction and Quality of Best Tracks Parameters for Study of Climate Change Impact on Tropical Cyclones over the North Indian Ocean during Satellite Era.- "Climate Change and southern Hemisphere Tropical Cyclones" International Initiative - Progress since the First International conference on Indian Ocean Tropical Cyclones and Climate Change.- Climate Change in Tropical Cyclones and Monsoon Depressions of North Indian Ocean.- Mechanism of the Indian Ocean Tropical Cyclone Frequency Changes due to Global Warming.- Recent Research at GDFL on Surface Temperature Trends and Simulations[...]

Fields of interest

Oceanography; Meteorology; Natural Hazards; Coastal Sciences; Atmospheric Sciences

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-7719-4

Distribution rights for SAARC countries: Capital Publishing Company, New Delhi, India

Hardcover

Jointly published with Capital Publishing Company, New Delhi, India

2014. 400 p. 202 illus., 104 illus. in color. With Jointly published with Capital Publishing Company, New Delhi, India.

\$179.00

ISBN 978-94-007-7719-4

Due: November 12, 2013

D.G. Pearson, University of Alberta, Edmonton, Canada; H.S. Grütter, University of Alberta, Edmonton, Canada; J.W. Harris, University of Glasgow, Glasgow, United Kingdom; B.A. Kjarsgaard, Geological Survey of Canada, Ottawa, Canada; H. O'Brien, Geological Survey of Finland (GTK), Espoo, Finland; N.V.C. Rao, Banaras Hindu University, Varanasi, India; S. Sparks, Bristol University, Bristol, United Kingdom (Eds.)

Proceedings of 10th International Kimberlite Conference

Volume One

International Kimberlite Conferences (IKCs) are special events that are held across the world once in four to five years. IKC is the confluence platform for academicians, scientists and industrial personnel concerned with diamond exploration and exploitation, petrology, geochemistry, geochronology, geophysics and origin of the primary diamond host rocks and their entrained xenoliths and xenocrysts (including diamond) to get together and deliberate on new advances in research made in the intervening years. Ever since the organization of first IKC in 1973 and its tremendous success, the entire geological world eagerly look forward to subsequent such conferences with great enthusiasm and [...]

Features

International Kimberlite conferences (IKCs) are special events that are held across the world once in four to five years. IKC is the confluence platform for academicians, scientists and industrial personnel concerned with diamond exploration and exploitation, petrology, geochemistry, geochronology, geophysics and origin of the primary diamond host rocks and their entrained xenoliths and xenocrysts [...]

Contents

Title Page.- Dedication.- About the Authors. Table of Contents.- Papers.- Author Index.

Fields of interest

Geochemistry; Structural Geology; Mineralogy

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-81-322-1169-3

Hardcover

2013. XIX, 350 p. 181 illus., 61 illus. in color.

\$259.00

ISBN 978-81-322-1169-3

Due: October 28, 2013

A. Ilki, Istanbul Technical University, Istanbul, Turkey; M.N. Fardis, University of Patras, Patras, Greece (Eds.)

Seismic Evaluation and Rehabilitation of Structures

In the past, facilities considered to be at the end of their useful life were demolished and replaced with new ones that better met the functional requirements of modern society, including new safety standards. Humankind has recently recognised the threats to the environment and to our limited natural resources due to our relentless determination to destroy the old and build anew. With the awareness of these constraints and the emphasis on sustainability, in future the majority of old structures will be retrofitted to extend their service life as long as feasible. In keeping with this new approach, the EU's Construction Products Regulation 305/2011, which is the basis of the [...]

Features

In the past, facilities considered to be at the end of their useful life were demolished and replaced with new ones that better met the functional requirements of modern society, including new safety standards. Humankind has recently recognised the threats to the environment and to our limited natural resources due to our relentless determination to destroy the old and build anew. With the awareness of [...]

Contents

Preface.- 1. Surrealism in Facing the Earthquake Risk.- 2. Rapid Seismic Assessment Procedures for the Turkish Building Stock.- 3. Post-Earthquake Risk-Based Decision Making Methodology for Turkish School Buildings.- 4. Proposed Vulnerability Functions to Estimate the Real Damage State of RC Buildings after Major Turkish Earthquakes.- 5. Probabilistic Path Finding Method for Post-Disaster Risk Estimation.- 6. Seismic Behaviour of Thin-Bed Layered Unreinforced Clay Masonry Shear Walls Including Soundproofing Elements.- 7. Assessing Seismic Vulnerability of Unreinforced Masonry Walls [...]

Fields of interest

Geotechnical Engineering & Applied Earth Sciences; Structural Mechanics; Civil Engineering; Vibration, Dynamical Systems, Control; Natural Hazards

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00457-0

Hardcover

2014. XIX, 497 p. 359 illus., 169 illus. in color. (Geotechnical, Geological and Earthquake Engineering, Vol. 26)

\$179.00

ISBN 978-3-319-00457-0

usually dispatched within 3 to 5 business days

M. Górski, Polish Academy of Sciences, Warsaw, Poland

Seismic Events in Glaciers

The occurrence of seismic events in glaciers has been an issue in the scientific literature since the early 1950s, following the report about icequakes in Baffin Island. Targeted seismological studies were undertaken by the Polish Expedition to Spitsbergen in 1962 and then continued at various glaciers in the Arctic, Antarctic and the Alps. The author of the book has been engaged in the project since 1970; he designed the layout of observations and instrumentation. The quakes he observed were categorized into two groups: typical seismic events called icequakes, and relatively long-period events named ice vibrations. In the case of icequakes, the space-time distributions and focal [...]

Features

The occurrence of seismic events in glaciers has been an issue in the scientific literature since the early 1950s, following the report about icequakes in Baffin Island. Targeted seismological studies were undertaken by the Polish Expedition to Spitsbergen in 1962 and then continued at various glaciers in the Arctic, Antarctic and the Alps. The author of the book has been engaged in the project since 1970; he [...]

Contents

Spectral analysis and source parameters of icequakes.- Predominant frequencies in spectra of ice vibration events.- Application of the shear-band model to the determination of focal parameters.

Fields of interest

Geophysics / Geodesy; Geology; Earth System Sciences

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-31850-4

Hardcover

2014. XVI, 99 p. 74 illus., 26 illus. in color. (GeoPlanet: Earth and Planetary Sciences)

\$129.00

ISBN 978-3-642-31850-4

usually dispatched within 3 to 5 business days

V.F. Pisarenko, Russian Academy of Sciences, Moscow, Russian Federation; M.V. Rodkin, Russian Academy of Sciences, Moscow, Russian Federation

Statistical Analysis of Natural Disasters and Related Losses

The study of disaster statistics and disaster occurrence is a complicated interdisciplinary field involving the interplay of new theoretical findings from several scientific fields like mathematics, physics, and computer science. Statistical studies on the mode of occurrence of natural disasters largely rely on fundamental findings in the statistics of rare events, which were derived in the 20th century. With regard to natural disasters, it is not so much the fact that the importance of this problem for mankind was recognized during the last third of the 20th century - the myths one encounters in ancient civilizations show that the problem of disasters has always been recognized - [...]

Features

The study of disaster statistics and disaster occurrence is a complicated interdisciplinary field involving the interplay of new theoretical findings from several scientific fields like mathematics, physics, and computer science. Statistical studies on the mode of occurrence of natural disasters largely rely on fundamental findings in the statistics of rare events, which were derived in the 20th century. [...]

Contents

The statistical methods of disaster analysis.- The heavy-tail distributions and their properties.- The contribution of maximum effect to the total, summarized effect under different distributions.- The stable approach to the risk assessment: estimation of quantiles of maximum effect.- Non-stationary natural processes, the "operational time" method.- The comparative study of disaster statistics for various natural disasters.- Earthquakes (energy, ground acceleration).- Floods, hurricanes (victims, overall economic losses, insured losses).- Tornadoes (victims, overall economic losses, [...])

Fields of interest

Natural Hazards; Geophysics / Geodesy; Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-01453-1

Softcover

2014. XI, 81 p. 84 illus. (SpringerBriefs in Earth Sciences)

\$54.99

ISBN 978-3-319-01453-1

usually dispatched within 3 to 5 business days

S. Krastel, J.-H. Behrmann, D. Völker, M. Stipp, C. Berndt, R. Urgelles, Institute of Marine Sciences, Barcelona, Spain; J. Chaytor, K. Huhn, M. Strasser, ETH Zurich, Zurich, Switzerland; C.B. Harbitz (Eds.)

Submarine Mass Movements and Their Consequences

6th International Symposium

Submarine mass movements are a hidden geohazard with large destructive potential for submarine installations and coastal areas. This hazard and associated risk is growing in proportion with increasing population of coastal urban agglomerations, industrial infrastructure, and coastal tourism. Also, the intensified use of the seafloor for natural resource production, and deep sea cables constitutes an increasing risk. Submarine slides may alter the coastline and bear a high tsunamogenic potential. There is a potential link of submarine mass wasting with climate change, as submarine landslides can uncover and release large amounts greenhouse gases, mainly methane, that are now stored in [...]

Features

Submarine mass movements are a hidden geohazard with large destructive potential for submarine installations and coastal areas. This hazard and associated risk is growing in proportion with increasing population of coastal urban agglomerations, industrial infrastructure, and coastal tourism. Also, the intensified use of the seafloor for natural resource production, and deep sea cables constitutes an increasing [...]

Contents

Physical properties of sediments.- Gas hydrates and role of interstitial fluids in submarine slope failure.- Slope stability and risk assessment.- Monitoring, observation and repeated surveys of active slope failure processes.- Understanding failure processes from submarine landslide geomorphology.- Interaction between ocean circulation and MTDs.- Landslide generated tsunamis.- Long-term record of submarine landslides and MTD paleoseismology.- Outcrops of ancient submarine landslides.

Fields of interest

Oceanography; Physical Geography; Geotechnical Engineering & Applied Earth Sciences; Sedimentology

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00971-1

Hardcover

2014. XVI, 683 p. 264 illus., 231 illus. in color. (Advances in Natural and Technological Hazards Research, Vol. 37)

\$229.00

ISBN 978-3-319-00971-1

usually dispatched within 3 to 5 business days

Economics

N.T. Thomopoulos, Illinois Institute of Technology, Chicago, USA

Assembly Line Planning and Control

Assembly Line Planning and Control describes the basic fundamentals of assembly lines for single model lines, mixed model make-to-stock lines, mixed model make-to-order lines and for one-station assembly. The book shows how to select the quantity of units to schedule for a shift duration, compute the number of operators needed on a line, set the conveyor speed, coordinate the main line with sub-assembly lines, assign the work elements to the operators on the line, sequence the models down the line, sequence the jobs down the line, calculate the part and component requirements for a line and for each station, determine the replenish needs of the parts and components from the [...]

Features

Assembly Line Planning and Control describes the basic fundamentals of assembly lines for single model lines, mixed model make-to-stock lines, mixed model make-to-order lines and for one-station assembly. The book shows how to select the quantity of units to schedule for a shift duration, compute the number of operators needed on a line, set the conveyor speed, coordinate the main line with sub-assembly [...]

Contents

Introduction.- Assembly Systems.- Some Fundamentals.- Preliminary Planning.- Inventory Replenishments.- Single Model Assembly.- Mixed Model Make-to-Stock Assembly.- Mixed Model Make-to-Order Assembly.- Postponement Assembly.- One Station Assembly.- Similarity Index.- Learning Curves.

Fields of interest

Operation Research / Decision Theory; Production / Logistics; Operating Procedures, Materials Treatment

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01398-5

Hardcover

2014. XVI, 145 p. 10 illus. in color.

\$129.00

ISBN 978-3-319-01398-5

usually dispatched within 3 to 5 business days

W. Jho, Yonsei University, Seoul, Korea, Republic of (South Korea)

Building Telecom Markets

Evolution of Governance in the Korean Mobile Telecommunication Market

The mobile telecommunication industry has been one of the fastest growing industries in the global economy since the late 1990s. As the first country to offer commercial Code Division Multiple Access (CDMA) cellular service in the world, Korea was able to jump right into the digital mobile markets, enhancing its status as a leading manufacturer of mobile equipment. While the growth of the telecom industry occurred with the emergence of worldwide market-oriented regulatory reform and liberalization in telecommunications, the state-market relationship in Korea evolved from state monopoly toward "centralized governance" and later toward "flexible governance," which is substantially [...]

Features

The mobile telecommunication industry has been one of the fastest growing industries in the global economy since the late 1990s. As the first country to offer commercial Code Division Multiple Access (CDMA) cellular service in the world, Korea was able to jump right into the digital mobile markets, enhancing its status as a leading manufacturer of mobile equipment. While the growth of the telecom industry [...]

Contents

1. Research Questions.- 2. Theoretical discussion.- 3. Global Challenges in Telecommunication.- 4. Overview of the Korean Response: From Monopolies to Liberalization.- 5. The Emergence of Centralized Governance in the Korean Mobile Market.- 6. The Emergence of Flexible Governance under the WTO Regime.- 7. Conclusion

Fields of interest

Economic Policy; Technology Management; Political Economy

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-7887-4

Hardcover

2014. XVIII, 222 p. 3 illus. (The Political Economy of the Asia Pacific)

\$129.00

ISBN 978-1-4614-7887-4

usually dispatched within 3 to 5 business days

S. Sreejesh, IFHE University, Hyderabad, India; S. Mohapatra, Xavier Institute of Management, Bhubaneswar, India; M.R. Anusree, University of Kerala, Trivandrum, India

Business Research Methods

An Applied Orientation

Since research is best learned by doing, this book emphasizes a hands-on, do-it yourself approach. The readers have many opportunities to see how business researches affect and support management decision. The book used a case study approach for all the chapters with interactive videos. The book gave emphasis to quantitative data analysis using a software program, IBM SPSS 20.0. The data analysis chapters illustrate in detail each step in running the software programs. The software programs files are provided for all data sets: outputs, demonstration movies, and screen captures are on the Website. This book provides students most extensive help available to learn quantitative data [...]

Features

Since research is best learned by doing, this book emphasizes a hands-on, do-it yourself approach. The readers have many opportunities to see how business researches affect and support management decision. The book used a case study approach for all the chapters with interactive videos. The book gave emphasis to quantitative data analysis using a software program, IBM SPSS 20.0. The data analysis chapters [...]

Contents

Introduction to Business Research.- Business Research Process.- Business Research Design: An Overview.- Exploratory Research Design.- Descriptive Research Design.- Causal Research Design: Experimentation.- Measurement and Scaling.- Questionnaire Design.- Data Preparation and Preliminary Analysis.- Analysis of Variance (ANOVA).- Regression Analysis.- Factor Analysis.- Cluster Analysis.- Logistic Regression.- Business Research Reports.

Fields of interest

Business & Management Science; Statistics for Business, Economics, Mathematical Finance, Insurance; Business Information Systems

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00538-6

Hardcover

2014. XXIII, 281 p. 54 illus., 31 illus. in color. With online files/update.

\$129.00

ISBN 978-3-319-00538-6

usually dispatched within 3 to 5 business days

A. Yüksel Mermod, Marmara University, Beykoz Istanbul, Turkey; S.O. Idowu, London Metropolitan Business School, London, United Kingdom (Eds.)

Corporate Social Responsibility in the Global Business World

This book provides an overview of the application of Corporate Social Responsibility in businesses and corporations around the world. Primarily based on real cases, it focuses on different approaches to CSR from a global perspective. It provides a critique of the "wrong" practices often employed even by multinational organizations, and highlights the resultant negative effects. On the other hand the book demonstrates good examples that can help multinationals or even entire countries to achieve both a better reputation and increased profitability. "CSR in the Global Business World" is a rich resource of illustrative cases, serving both as a basis for ongoing research as well as for [...]

Features

This book provides an overview of the application of Corporate Social Responsibility in businesses and corporations around the world. Primarily based on real cases, it focuses on different approaches to CSR from a global perspective. It provides a critique of the "wrong" practices often employed even by multinational organizations, and highlights the resultant negative effects. On the other hand the book [...]

Contents

Part One: Professionals' CSR.- Part Two: Corporate Governance and Financial Crisis.- Part Three: Not-for-Profit Sector and SMEs.- Part Four: Ethics, Morality and CSR in Corporations.- Part Five: CSR in Education and Socially Responsible Investment.

Fields of interest

Non-Profit Enterprises/Corporate Social Responsibility; Migration; Marketing

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-37619-1

Hardcover

2014. XXXV, 367 p. 15 illus.

\$179.00

ISBN 978-3-642-37619-1

usually dispatched within 3 to 5 business days

L. Gan, Z. Yin, Southwestern University of Finance and E, Chengdu, China (P.R.); N. Jia, Southwestern University of Finance and E, Chengdu, China (P.R.); S. Xu, Southwestern University of Finance and E, Chengdu, China (P.R.); S. Ma, Southwestern University of Finance and E, Chengdu, China (P.R.); L. Zheng, Southwestern University of Finance and E, Chengdu, China (P.R.)

Data you need to know about China

Research Report of China Household Finance Survey-2012

Since the beginning of the 21st century, China has been experiencing a dramatically rapid economic development. What is the real life of Chinese people like under China's steady GDP fast growth? How rich are the rich and how poor are the poor? This book provides first-hand data on standards of living in Chinese households, which may help to answer the above questions. The Survey and Research Center for China Household Finance conducted the first and only nationally representative survey on household finance in China in 2011. The China Household Finance Survey (CHFS) collected the micro-level information of Chinese households' demographics, housing and financial assets, debt and credit[...]

Features

Since the beginning of the 21st century, China has been experiencing a dramatically rapid economic development. What is the real life of Chinese people like under China's steady GDP fast growth? How rich are the rich and how poor are the poor? This book provides first-hand data on standards of living in Chinese households, which may help to answer the above questions. The Survey and Research [...]

Contents

Survey design.- Household demographics and work characteristics.- Non-financial assets.- Household financial assets.- Household debts.- Insurance and social welfare.- Expenditure and income.- Household wealth.

Fields of interest

Financial Economics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-38150-8

Hardcover

2014. XV, 172 p. 168 illus., 17 illus. in color.

\$129.00

ISBN 978-3-642-38150-8

usually dispatched within 3 to 5 business days

L. Leifer, Stanford University, Stanford, USA; H. Plattner, Hasso-Plattner-Institute, Potsdam, Germany; C. Meinel, Hasso-Plattner-Institute, Potsdam, Germany (Eds.)

Design Thinking Research

Building Innovation Eco-Systems

This book summarizes the results of Design Thinking Research carried out at Stanford University in Palo Alto, California, USA, and Hasso Plattner Institute in Potsdam, Germany. The authors offer readers a closer look at Design Thinking with its processes of innovations and methods. The contents of the articles range from how to design ideas, methods, and technologies via creativity experiments and wicked problem solutions, to creative collaboration in the real world and the connectivity of designers and engineers. But the topics go beyond this in their detailed exploration of design thinking and its use in IT systems engineering fields and even from a management perspective. The authors [...]

Features

This book summarizes the results of Design Thinking Research carried out at Stanford University in Palo Alto, California, USA, and Hasso Plattner Institute in Potsdam, Germany. The authors offer readers a closer look at Design Thinking with its processes of innovations and methods. The contents of the articles range from how to design ideas, methods, and technologies via creativity experiments and [...]

Contents

All Design Activity is Ultimately Social in Nature.- Design Thinkers Must Preserve Ambiguity.- All Design is Re-design.- Make Ideas Tangible.

Fields of interest

Business Information Systems; Technology Management; Software Engineering; Management of Computing and Information Systems; Media Management; Media Design

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-319-01302-2

Hardcover

2014. VIII, 252 p. 72 illus. (Understanding Innovation)

\$129.00

ISBN 978-3-319-01302-2

usually dispatched within 3 to 5 business days

B. Vagadia

Enterprise Governance

Driving Enterprise Performance Through Strategic Alignment

This book is written for business leaders and those that govern organisations. All high performing organisations excel in achieving 7 organisational outcomes: Accountability, Awareness, Adaptability, Agility, Alignment, Action and Achievement. The enterprise governance framework must deliver on these 7 As through penetrating and integrating three organisational governance layers to drive high performance. These include: corporate governance, strategic governance and operational governance. The book unifies traditional corporate governance, leadership, and strategic management processes, whilst seeking to understand what actually happens on the ground to keep the organisation working[...]

Features

This book is written for business leaders and those that govern organisations. All high performing organisations excel in achieving 7 organisational outcomes: Accountability, Awareness, Adaptability, Agility, Alignment, Action and Achievement. The enterprise governance framework must deliver on these 7 As through penetrating and integrating three organisational governance layers to drive high performance. [...]

Contents

A New Approach and Model for Organisational Governance.- Delivering High Performance Organisations Through Enterprise-Wide Governance and Strategic Leadership.- Operational Governance.- Strategic Governance.- Corporate Governance.- Joint Governance.- Systematising Enterprise Governance.- Annex: A Summary of the Corporate Governance Requirements of Different Countries.- Further Reading.

Fields of interest

Business Strategy/Leadership; Management/Business for Professionals; Organization / Planning

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-3-642-38588-9

Hardcover

2014. XXVII, 288 p. 34 illus. (Management for Professionals)

\$79.99

ISBN 978-3-642-38588-9

usually dispatched within 3 to 5 business days

K.E. Kurbel, European University Viadrina, Frankfurt (Oder), Germany

Enterprise Resource Planning and Supply Chain Management

Functions, Business Processes and Software for Manufacturing Companies

This book is about running modern industrial enterprises with the help of information systems. Enterprise resource planning (ERP) is the core of business information processing. An ERP system is the backbone of most companies' information systems landscape. All major business processes are handled with the help of this system. Supply chain management (SCM) looks beyond the individual company, taking into account that enterprises are increasingly concentrating on their core competencies, leaving other activities to suppliers. With the growing dependency on the partners, effective supply chains have become as important for a company's success as efficient in-house processes. This [...]

Features

This book is about running modern industrial enterprises with the help of information systems. Enterprise resource planning (ERP) is the core of business information processing. An ERP system is the backbone of most companies' information systems landscape. All major business processes are handled with the help of this system. Supply chain management (SCM) looks beyond the individual company, [...]

Contents

Business Information Systems.- MRP – Material Requirements Planning.- MRP II – Manufacturing Resource Planning.- ERP – Enterprise Resource Planning.- Case: SAP ERP.- ERP System Implementation.- Manufacturing Systems.- SCM – Supply Chain Management.- SCM Data Structures and Advanced Planning.- Case: SAP SCM.- Current and Future Trends.

Fields of interest

Business Information Systems; Production / Logistics; Information Systems Applications (incl. Internet)

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-3-642-31572-5

Hardcover

2013. XII, 359 p. 212 illus. (Progress in IS)

\$119.00

ISBN 978-3-642-31572-5

usually dispatched within 3 to 5 business days

D. Veit, Universität Augsburg, Augsburg, Germany; J. Huntgeburth, Universität Augsburg, Augsburg, Germany

Foundations of Digital Government

Leading and Managing in the Digital Era

Digital government consists in the purposeful use of information and communication technologies (ICT), in particular the internet, to transform the relationship between government and society in a positive manner. This book focuses on the current status, prospects and foundations of digital government. Integrating examples and cases from administrative practice, it covers all important aspects of digital government management. Learning outcomes include Understanding the implications of the internet for government and society Gaining deeper insights into the concept and opportunities of digital democracy Understanding the challenges of moving public services online

Features

Digital government consists in the purposeful use of information and communication technologies (ICT), in particular the internet, to transform the relationship between government and society in a positive manner. This book focuses on the current status, prospects and foundations of digital government. Integrating examples and cases from administrative practice, it covers all important aspects of digital [...]

Contents

Preface.- 1 Introduction to Digital Government.- 2 Impact of Digital Government.- 3 The Digital Divide.- 4 Legal Aspects of Digital Service Delivery.- 5 Online One-Stop Government.- 6 Open Government.- 7 E-Procurement.- 8 E-Voting.- 9 E-Participation.- 10 Lesson Learned and Outlook.

Fields of interest

Business Information Systems; Public Administration; Computers and Society; Management of Computing and Information Systems; Legal Aspects of Computing; Political Science, general

Target groups

Upper undergraduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-3-642-38510-0

Hardcover

2014. XIII, 158 p. 42 illus. (Springer Texts in Business and Economics)

\$89.99

ISBN 978-3-642-38510-0

usually dispatched within 3 to 5 business days

M.M. Fischer, Vienna University of Economics, Vienna, Austria; P. Nijkamp, Free University, Amsterdam, Netherlands (Eds.)

Handbook of Regional Science

The Handbook of Regional Science is a multi-volume reference work providing a state-of-the-art knowledge on regional science composed by renowned scientists in the field. The Handbook is intended to serve the academic needs of graduate students, and junior and senior scientists in regional science and related fields, with an interest in studying local and regional socio-economic issues. The multi-volume handbook seeks to cover the field of regional science comprehensively, including areas such as regional housing and labor markets, regional economic growth, innovation and regional economic development, new and evolutionary economic geography, location and interaction, the environment [...]

Features

The Handbook of Regional Science is a multi-volume reference work providing a state-of-the-art knowledge on regional science composed by renowned scientists in the field. The Handbook is intended to serve the academic needs of graduate students, and junior and senior scientists in regional science and related fields, with an interest in studying local and regional socio-economic issues. The [...]

Contents

1 Regional Housing and Labor Markets.- 2 Regional Economic Growth.- 3 Innovation and Regional Economic Development.- 4 New Economic Geography and Evolutionary Economic Geography.- 5 Location and Interaction.- 6 Environmental and Natural Resources.- 7 Spatial Analysis and Geocomputation.- 8 Spatial Statistics.- 9 Spatial Econometrics.

Fields of interest

Regional Science; Economic Geography; Migration; Statistics for Business, Economics, Mathematical Finance, Insurance; Environmental Economics

Target groups

Upper undergraduate

Type of publication

Handbook

More on www.springer.com/978-3-642-23429-3

Hardcover

2014. XXXVIII, 1732 p. 219 illus., 86 illus. in color. In 3 volumes, not available separately.

\$949.00

ISBN 978-3-642-23429-3

usually dispatched within 3 to 5 business days

Hardcover

2014. XXXVIII, 1732 p. 219 illus., 86 illus. in color. Print + eReference. In 3 volumes, not available separately.

\$1,200.00

ISBN 978-3-642-23431-6

Due: July 30, 2013

L. Zamosky

Healthcare, Insurance, and You

The Savvy Consumer's Guide

Healthcare is changing and you need to know how and what to do about it. Getting good medical care shouldn't be so confusing or so costly. Healthcare, Insurance, and You simplifies the many confusing details about our healthcare system so you can make informed decisions. Result? Better health at lower cost. With the advent of healthcare reform, things are changing especially when it comes to insurance. Most people will now have to buy insurance. Do you know where to get a policy or what to look for in one? Did you know more people will now qualify for free or subsidized healthcare? Even if you get insurance through work, you'll face new choices that you'd better understand to [...]

Features

Healthcare is changing and you need to know how and what to do about it. Getting good medical care shouldn't be so confusing or so costly. Healthcare, Insurance, and You simplifies the many confusing details about our healthcare system so you can make informed decisions. Result? Better health at lower cost. With the advent of healthcare reform, things are [...]

Fields of interest

Business & Management Science

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-4953-5

Softcover

2013. 188 p.

\$19.99

ISBN 978-1-4302-4953-5

usually dispatched within 3 to 5 business days

S. Wrycza, University of Gdańsk, Sopot, Poland (Ed.)

Information Systems: Development, Learning, Security

6th SIGSAND/PLAIS EuroSymposium 2013, Gdańsk, Poland, September 26, 2013, Proceedings

This book constitutes the proceedings of the 6th Euro Symposium on Systems Analysis and Design, SIGSAND/PLAIS 2013, held in Gdańsk, Poland, in September 2013. The objective of this symposium is to promote and develop high-quality research on all issues related to systems analysis and design (SAND). It provides a forum for SAND researchers and practitioners in Europe and beyond to interact, collaborate, and develop their field. The 8 papers were carefully reviewed and selected with an acceptance rate of 40% and reflect the current trends in systems analysis and design. The contributions are organized into topical sections on information systems development, information systems security [...]

Features

This book constitutes the proceedings of the 6th Euro Symposium on Systems Analysis and Design, SIGSAND/PLAIS 2013, held in Gdańsk, Poland, in September 2013. The objective of this symposium is to promote and develop high-quality research on all issues related to systems analysis and design (SAND). It provides a forum for SAND researchers and practitioners in Europe and beyond to interact, collaborate, and [...]

Contents

Chapter I - Information Systems Development.- Rule Based Approach for Ensuring Consistency in Different UML Models.- Development of Requirements on the Role Business Analyst.- ERP in Project-Driven Organizations: A Case-Study from IT Industry in Poland.- Chapter II - Information Systems Security.- Specifying Security at the Systems Analysis Level: Operational, Public-Image and Legal Aspects.- Identifying Factors of an Information Security Management System of Local Self-government Bodies.- The Integration of Web-Based Information and the Structured Data in Data Warehousing.- Chapter III [...]

Fields of interest

Business Information Systems; Computer Appl. in Administrative Data Processing; Information Systems Applications (incl. Internet); Software Engineering

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40854-0

Softcover

2013. XII, 95 p. 25 illus. (Lecture Notes in Business Information Processing, Vol. 161)

\$72.00

ISBN 978-3-642-40854-0

usually dispatched within 3 to 5 business days

Z. Xu, PLA University of Science and Technology, Nanjing, China (P.R.)

Intuitionistic Preference Modeling and Interactive Decision Making

This book offers an in-depth and comprehensive introduction to the priority methods of intuitionistic preference relations, the consistency and consensus improving procedures for intuitionistic preference relations, the approaches to group decision making based on intuitionistic preference relations, the approaches and models for interactive decision making with intuitionistic fuzzy information, and the extended results in interval-valued intuitionistic fuzzy environments.

Features

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Contents

1 Intuitionistic Preference Relations.- 1.1 Concepts and Operations.- 1.2 Estimation Algorithms for Acceptable Incomplete Intuitionistic Fuzzy Preference Relations.- 1.2.1 The Estimation Algorithm for an Acceptable Incomplete Intuitionistic Fuzzy Preference Relation with the Least Judgements.- 1.2.2 The Estimation Algorithm for Acceptable Incomplete Fuzzy Preference Relation with More Known Judgements.- 1.2.3 Illustrative Example.- 1.3 Group Decision Making with Incomplete Interval-valued Intuitionistic Preference Relation.- 1.3.1 Incomplete Interval-valued Intuitionistic Preference [...]

Fields of interest

Operation Research / Decision Theory

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-28402-1

Hardcover

2014. XI, 233 p. 13 illus., 8 illus. in color. (Studies in Fuzziness and Soft Computing, Vol. 280)

\$179.00

ISBN 978-3-642-28402-1

usually dispatched within 3 to 5 business days

M. Schlachter

Invest Like an Institution

Professional Strategies for Funding a Successful Retirement

All too often, when investors go in search of investment advice, they are met with television personalities and so-called investment #gurus# who do little more than push the latest and greatest scheme to retire rich. Your retirement funds#in the form of IRAs, 401(k)s, SEP or Simple IRAs, and other plans you can direct to some degree#are, however, far too precious to bet on the latest scheme, trend, or tip you heard at a party. In Invest Like an Institution: Professional Strategies for Funding a Successful Retirement, Michael Schlachter provides individual investors with the tools they need to build a portfolio that not only protects their wealth but helps it grow for the long term.[...]

Features

All too often, when investors go in search of investment advice, they are met with television personalities and so-called investment #gurus# who do little more than push the latest and greatest scheme to retire rich. Your retirement funds#in the form of IRAs, 401(k)s, SEP or Simple IRAs, and other plans you can direct to some degree#are, however, far too precious to bet on the latest [...]

Fields of interest

Business & Management Science

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-5059-3

Softcover

2013. 228 p.

\$29.99

ISBN 978-1-4302-5059-3

usually dispatched within 3 to 5 business days

D.S. Mutum, Coventry Business School, Coventry, United Kingdom; S.K. Roy, E. Kipnis (Eds.)

Marketing Cases from Emerging Markets

Despite the fact that experts acknowledge the importance of the emerging markets, there is a dearth of real case studies specially focussed on marketing issues. This case study book addresses that need. It is also important and timely in providing a framework for instructors and researchers (both academic and industry) to understand the dynamics occurring in emerging markets. This book is composed of long and short real cases with varying complexity in different sectors including airlines, hotel, fashion, etc. These will cover issues which are unique to the emerging markets (including the BRIC countries) to understand the dynamics occurring in these countries. With its case studies,[...]

Features

Despite the fact that experts acknowledge the importance of the emerging markets, there is a dearth of real case studies specially focussed on marketing issues. This case study book addresses that need. It is also important and timely in providing a framework for instructors and researchers (both academic and industry) to understand the dynamics occurring in emerging markets. This book is composed of long and [...]

Contents

Introduction.- Socio-Cultural Influences.- Market Orientation and Brand Strategies.- Product Development and Market entry.- Marketing communications and Social Media Marketing.- Conclusion.

Fields of interest

Marketing; Emerging Markets/Globalization; Business Strategy/Leadership; Market Research

Target groups

Upper undergraduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-3-642-36860-8

Hardcover

2014. IX, 167 p. 6 illus.

\$89.99

ISBN 978-3-642-36860-8

usually dispatched within 3 to 5 business days

F. El Ouardighi, ESSEC Business School, Cergy Pontoise, France; K. Kogan, Bar-Ilan University, Ramat-Gan, Israel (Eds.)

Models and Methods in Economics and Management Science

Essays in Honor of Charles S. Tapiero

With this book, distinguished and notable contributors wish to honor Professor Charles S. Tapiero's scientific achievements. Although it covers only a few of the directions Professor Tapiero has taken in his work, it presents important modern developments in theory and in diverse applications, as studied by his colleagues and followers, further advancing the topics Tapiero has been investigating. The book is divided into three parts featuring original contributions covering the following areas: general modeling and analysis; applications to marketing, economy and finance; and applications to operations and manufacturing. Professor Tapiero is among the most active researchers in control[...]

Features

With this book, distinguished and notable contributors wish to honor Professor Charles S. Tapiero's scientific achievements. Although it covers only a few of the directions Professor Tapiero has taken in his work, it presents important modern developments in theory and in diverse applications, as studied by his colleagues and followers, further advancing the topics Tapiero has been investigating. The book [...]

Contents

Feedback Stackelberg Solutions of Infinite-Horizon Stochastic Differential Games.- Linear-Quadratic Stochastic Differential Games with General Noise Processes.- Suboptimal Policies for Stochastic N-Stage Optimization: Accuracy Analysis and a Case Study from Optimal Consumption.- Effective Information in Offline Stochastic Feedback and Optimal Control of Dynamic Systems: Results and Applications.- A Paradox of the Mean Variance Setting for the Long Term Investor.- Relationships in Marketing and Optimal Control.- Attachment and Forgiveness in a Behavioural, Non-Cooperative Dynamic Game.- [...]

Fields of interest

Operation Research / Decision Theory; Operations Research, Mathematical Programming; Engineering Economics, Organization, Logistics, Marketing

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00668-0

Hardcover

2014. XIII, 254 p. 23 illus., 7 illus. in color. (International Series in Operations Research & Management Science, Vol. 198)

\$129.00

ISBN 978-3-319-00668-0

usually dispatched within 3 to 5 business days

Y. Su, L. Chen

Modern Oriental Corporate Culture

A Case Collection

The book covers Oriental management theories as well as their applications; research on positivism; long-term focus; exclusive interviews and accumulating first-hand data, etc. It also addresses the following topics: Chinese family businesses that have survived for more than one hundred years (e.g. INFINITUS, Beijing TRT); Chinese enterprises and firms that follow the oriental management culture serve as the dynamic engines to the 2nd largest economic entity in the world (e.g., Huawei Technologies Co., Ltd., Mengniu Dairy Gr., Hainan Airlines and so on); Eastern and western managerial cultures that have been growing within Chinese businesses (e.g., Hainan Airlines, INFINITUS); Varied[...]

Features

The book covers Oriental management theories as well as their applications; research on positivism; long-term focus; exclusive interviews and accumulating first-hand data, etc. It also addresses the following topics: Chinese family businesses that have survived for more than one hundred years (e.g. INFINITUS, Beijing TRT); Chinese enterprises and firms that follow the oriental management culture serve as the [...]

Contents

Foreword.- Introduction.- About Oriental Management (OM).- Case One: Practicing Shared Benevolence and Improving World Health.- Case Two: The "Three Great Ways".- Case Three: Management Philosophy at ING-Aetna Life Insurance Co.- Case Four: Running a City in West China.- Case Five: The Mengniu "Tao".- Case Six: Ancient Art of War Style Management at Huawei Technologies Co., Ltd.- Case Seven: Assimilating Chinese and Western Cultures at Hainan Airlines (HNA).- Case Eight: Building a World Famous Kangnai Group Based on a Family Culture.- Case Nine: College Mental Management.- References.- [...]

Fields of interest

Business & Management Science; Organization / Planning; Cultural Management

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-3-642-35213-3

Hardcover

2014. XXI, 118 p. 8 illus.

\$59.99

ISBN 978-3-642-35213-3

usually dispatched within 3 to 5 business days

C.Y.-Y. Lin, National Chengchi University, Taipei, Taiwan; L. Edvinsson, J. Chen, Accenture, Chicago, USA; T. Beding

National Intellectual Capital and the Financial Crisis in Austria, Belgium, the Netherlands, and Switzerland

In the first decade of the twenty-first century, the biggest event of worldwide proportion was the 2008 global financial crisis, which was caused primarily by ineffective governance, failed surveillance systems, and implementation flaws. While fiscal and monetary policies succeeded in pulling many countries out of a financial freefall, most economies have performed beneath pre-recession levels as governments continued to struggle with their finances. Examining the financial crisis from the viewpoint of intangible assets provides a different perspective from traditional economic approaches. National Intellectual Capital (NIC), comprised mainly of human capital, market capital, [...]

Features

In the first decade of the twenty-first century, the biggest event of worldwide proportion was the 2008 global financial crisis, which was caused primarily by ineffective governance, failed surveillance systems, and implementation flaws. While fiscal and monetary policies succeeded in pulling many countries out of a financial freefall, most economies have performed beneath pre-recession levels as [...]

Contents

Chapter 1 Introduction.- Chapter 2 Impact of 2008 Global Financial Crisis.- Chapter 3 National Intellectual Capital Development of the Four Small European Countries.- Chapter 4 The Aftermath of 2008 Global Financial Crisis.- Chapter 5 Future Perspective and Policy Implications.

Fields of interest

Economic Growth; Economic Policy; R & D / Technology Policy; Regional Science

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8020-4

Softcover

2014. XXXI, 109 p. 39 illus., 35 illus. in color. (SpringerBriefs in Economics)

\$49.99

ISBN 978-1-4614-8020-4

usually dispatched within 3 to 5 business days

C.Y.-Y. Lin, National Chengchi University, Taipei, Taiwan; L. Edvinsson, Universal Networking Intellectual Capital, Norrtälje, Sweden; J. Chen, Accenture, Chicago, USA; T. Beding

National Intellectual Capital and the Financial Crisis in Bulgaria, Czech Republic, Hungary, Romania, and Poland

In the first decade of the twenty-first century, the biggest event of worldwide proportion was the 2008 global financial crisis, which was caused primarily by ineffective governance, failed surveillance systems, and implementation flaws. While fiscal and monetary policies succeeded in pulling many countries out of a financial freefall, most economies have performed beneath pre-recession levels as governments continued to struggle with their finances. Examining the financial crisis from the viewpoint of intangible assets provides a different perspective from traditional economic approaches. National Intellectual Capital (NIC), comprised mainly of human capital, market capital, [...]

Features

In the first decade of the twenty-first century, the biggest event of worldwide proportion was the 2008 global financial crisis, which was caused primarily by ineffective governance, failed surveillance systems, and implementation flaws. While fiscal and monetary policies succeeded in pulling many countries out of a financial freefall, most economies have performed beneath pre-recession levels as [...]

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Chapter 1 Introduction.- Chapter 2 Impact of the 2008 Financial Crisis.- Chapter 3 National Intellectual Capital Development of the Five Emerging European Countries.- Chapter 4 Beyond the 2008 Global Financial Crisis.- Chapter 5 Future Perspectives and Policy Implications.

Fields of interest

Economic Growth; Economic Policy; R & D / Technology Policy; Regional Science

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8017-4

Softcover

2014. XXXI, 119 p. 41 illus. in color. (SpringerBriefs in Economics, Vol. 15)

\$49.99

ISBN 978-1-4614-8017-4

usually dispatched within 3 to 5 business days

C.Y.-Y. Lin, National Chengchi University, Taipei, Taiwan; L. Edvinsson, J. Chen, Accenture, Chicago, USA; T. Beding

National Intellectual Capital and the Financial Crisis in France, Germany, Ireland, and the United Kingdom

In the first decade of the twenty-first century, the biggest event of worldwide proportion was the 2008 global financial crisis, which was caused primarily by ineffective governance, failed surveillance systems, and implementation flaws. While fiscal and monetary policies succeeded in pulling many countries out of a financial freefall, most economies have performed beneath pre-recession levels as governments continued to struggle with their finances. Examining the financial crisis from the viewpoint of intangible assets provides a different perspective from traditional economic approaches. National Intellectual Capital (NIC), comprised mainly of human capital, market capital, [...]

Features

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Chapter 1 Introduction.- Chapter 2 Impact of the 2008 Global Financial Crisis.- Chapter 3 National Intellectual Capital Development of Four Large European Countries.- Chapter 4 Beyond the 2008 Global Financial Crisis.- Chapter 5 Future Perspectives and Policy Implications.

Fields of interest

Economic Growth; Economic Policy; R & D / Technology Policy; Regional Science

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8180-5

Softcover

2014. XXXI, 112 p. 39 illus., 37 illus. in color. (SpringerBriefs in Economics)

\$49.99

ISBN 978-1-4614-8180-5

usually dispatched within 3 to 5 business days

C.Y.-Y. Lin, National Chengchi University, Taipei, Taiwan; L. Edvinsson, J. Chen, Accenture, Chicago, USA; T. Beding

National Intellectual Capital and the Financial Crisis in Indonesia, Malaysia, The Philippines, and Thailand

In the first decade of the twenty-first century, the biggest event of worldwide proportion was the 2008 global financial crisis, which was caused primarily by ineffective governance, failed surveillance systems, and implementation flaws. While fiscal and monetary policies succeeded in pulling many countries out of a financial freefall, most economies have performed beneath pre-recession levels as governments continued to struggle with their finances. Examining the financial crisis from the viewpoint of intangible assets provides a different perspective from traditional economic approaches. National Intellectual Capital (NIC), comprised mainly of human capital, market capital, [...]

Features

In the first decade of the twenty-first century, the biggest event of worldwide proportion was the 2008 global financial crisis, which was caused primarily by ineffective governance, failed surveillance systems, and implementation flaws. While fiscal and monetary policies succeeded in pulling many countries out of a financial freefall, most economies have performed beneath pre-recession levels as [...]

Contents

Chapter 1 Introduction.- Chapter 2 Impact of the 2008 Global Financial Crisis.- Chapter 3 National Intellectual Capital Development of the Four Southeast Asian Countries.- Chapter 4 Beyond the 2008 Global Financial Crisis.- Chapter 5 Future Perspective and Policy Implications.

Fields of interest

Economic Growth; Economic Policy; R & D / Technology Policy; Regional Science

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-7942-0

Softcover

2014. XXXI, 111 p. 27 illus. in color. (SpringerBriefs in Economics)

\$49.99

ISBN 978-1-4614-7942-0

usually dispatched within 3 to 5 business days

C.Y.-Y. Lin, National Chengchi University, Taipei, Taiwan; L. Edvinsson, J. Chen, Accenture, Chicago, USA; T. Beding

National Intellectual Capital and the Financial Crisis in Israel, Jordan, South Africa, and Turkey

In the first decade of the twenty-first century, the biggest event of worldwide proportion was the 2008 global financial crisis, which was caused primarily by ineffective governance, failed surveillance systems, and implementation flaws. While fiscal and monetary policies succeeded in pulling many countries out of a financial freefall, most economies have performed beneath pre-recession levels as governments continued to struggle with their finances. Examining the financial crisis from the viewpoint of intangible assets provides a different perspective from traditional economic approaches. National Intellectual Capital (NIC), comprised mainly of human capital, market capital, [...]

Features

In the first decade of the twenty-first century, the biggest event of worldwide proportion was the 2008 global financial crisis, which was caused primarily by ineffective governance, failed surveillance systems, and implementation flaws. While fiscal and monetary policies succeeded in pulling many countries out of a financial freefall, most economies have performed beneath pre-recession levels as [...]

Contents

Chapter 1 Introduction.- Chapter 2 Impact of 2008 Global Financial Crisis.- Chapter 3 National Intellectual Capital Development in the Four Countries.- Chapter 4 Beyond the 2008 Global Financial Crisis.- Chapter 5 Future Perspective and Policy Implications.

Fields of interest

Economic Growth; Economic Policy; R & D / Technology Policy; Regional Science

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-7980-2

Softcover

2014. XXIX, 107 p. 39 illus., 37 illus. in color. (SpringerBriefs in Economics)

\$49.99

ISBN 978-1-4614-7980-2

usually dispatched within 3 to 5 business days

S.R. Balzac

Organizational Psychology for Managers

No matter how monolithic it may appear, an organization is a collection of moving parts. Whether we are looking at building teams, providing leadership, hiring and training employees, problem solving, managing time effectively, or setting aggressive, inspiring goals, every decision can easily impact every other decision. The complexity can quickly become overwhelming. Organizational Psychology identifies a framework and offers key methodologies managers need to define behavioral tendencies and navigate complex organizational systems. Each chapter takes a high-level view of a particular aspect of organizational psychology, focusing on elements that shape companies and drive[...]

Features

No matter how monolithic it may appear, an organization is a collection of moving parts. Whether we are looking at building teams, providing leadership, hiring and training employees, problem solving, managing time effectively, or setting aggressive, inspiring goals, every decision can easily impact every other decision. The complexity can quickly become overwhelming. Organizational Psychology for [...]

Contents

Chapter 1: The Vortex: Organizations as Systems.- Chapter 2: Telling Your Story: Organizational Vision as a Driver of Success.- Chapter 3: The Life Cycle of a Team: Development, Problem Solving, and Decision Making.- Chapter 4: Leadership, Power, and Emotional Intelligence.- Chapter 5: Motivating and Loyalty: Creating a Motivated Work Force.- Chapter 6: Recruiting with Confidence: Developing Effective Strategies and Having the Confidence to Use Them.- Chapter 7: Justice and Fairness in Organizations.- Chapter 8: Organizational Learning.- Chapter 9: The Myth of Productivity:[...]

Fields of interest

Management/Business for Professionals; Organization / Planning; General Psychology

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-1-4614-8504-9

Hardcover

2014. XVII, 266 p. 4 illus. (Management for Professionals)

\$79.99

ISBN 978-1-4614-8504-9

usually dispatched within 3 to 5 business days

A. Kobylinski, Warsaw School of Economics, Warsaw, Poland; A. Sobczak (Eds.)

Perspectives in Business Informatics Research

12th International Conference, BIR 2013, Warsaw, Poland, September 23-25, 2013, Proceedings

This book constitutes a collection of selected contributions from the 12th International Conference on Perspectives in Business Informatics Research, BIR 2013, held in Warsaw, Poland, in September 2013. Overall, 54 submissions were rigorously reviewed by 41 members of the Program Committee representing 21 countries. As a result, 19 full and 5 short papers from 12 countries have been selected for publication in this volume. This book also includes the two keynotes by Witold Abramowicz and Bernhard Thalheim. The papers cover many aspects of business information research and have been organized in topical sections on: business process management; enterprise and knowledge architectures; [...]

Features

This book constitutes a collection of selected contributions from the 12th International Conference on Perspectives in Business Informatics Research, BIR 2013, held in Warsaw, Poland, in September 2013. Overall, 54 submissions were rigorously reviewed by 41 members of the Program Committee representing 21 countries. As a result, 19 full and 5 short papers from 12 countries have been selected for publication in [...]

Contents

Part: Keynotes.- Should Business Informatics Care about Linked Open Data?.- Open Problems of Information Systems Research and Technology.- Part: Business Process Management.- Requirements Definition for Domain-Specific Modelling Languages: The Com Vantage Case.- Using Process Variants in Design of Flow Management Systems.- Visual Simulation for the BPM-Based Process Automation.- Towards Completeness and Lawfulness of Business Process Models.- Cooperation of Business Processes - A Central Point of the Content, Technical, and Human Aspects of Organization Management.- Part: Enterprise and [...]

Fields of interest

Business Information Systems; Computer Appl. in Administrative Data Processing; Information Storage and Retrieval; Information Systems Applications (incl. Internet)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40822-9

Softcover

2013. XII, 335 p. 91 illus. (Lecture Notes in Business Information Processing, Vol. 158)

\$83.00

ISBN 978-3-642-40822-9

usually dispatched within 3 to 5 business days

F.E. Benth, University of Oslo, Oslo, Norway; V.A. Kholodnyi, Verbund Trading AG, Vienna, Austria; P. Laurence, University di Roma, La Sapienza, Rome, Italy (Eds.)

Quantitative Energy Finance

Modeling, Pricing, and Hedging in Energy and Commodity Markets

Finance and energy markets have been an active scientific field for some time, even though the development and applications of sophisticated quantitative methods in these areas are relatively new—and referred to in a broader context as energy finance. Energy finance is often viewed as a branch of mathematical finance, yet this area continues to provide a rich source of issues that are fuelling new and exciting research developments. Based on a special thematic year at the Wolfgang Pauli Institute (WPI) in Vienna, Austria, this edited collection features cutting-edge research from leading scientists in the fields of energy and commodity finance. Topics discussed include modeling and [...]

Features

Finance and energy markets have been an active scientific field for some time, even though the development and applications of sophisticated quantitative methods in these areas are relatively new—and referred to in a broader context as energy finance. Energy finance is often viewed as a branch of mathematical finance, yet this area continues to provide a rich source of issues that are fuelling new and [...]

Contents

A review of optimal investment rules in electricity generation.- A Survey of Commodity Markets and Structural Models for Electricity Prices.- Fourier based valuation methods in mathematical finance.- Mathematics of Swing Options: A Survey.- Inference for Markov-regime switching models of electricity spot prices.- Modelling electricity day-ahead prices by multivariate Lévy semistationary processes.- Modelling Power Forward Prices.- An analysis of the main determinants of electricity forward prices and forward risk premia.- A Dynamic Lévy Copula Model for the Spark Spread.- Constrained [...]

Fields of interest

Finance / Banking; Quantitative Finance; Statistics for Business, Economics, Mathematical Finance, Insurance; Energy Policy, Economics and Management

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7247-6

Hardcover

2014. XVIII, 308 p. 85 illus., 67 illus. in color.

\$129.00

ISBN 978-1-4614-7247-6

usually dispatched within 3 to 5 business days

B. Berg, Universität Trier, Trier, Germany

Retail Branding and Store Loyalty

Analysis in the Context of Reciprocity, Store Accessibility, and Retail Formats

Marketers and retailers have to understand how to manage different consumer perception levels of retail brands, which have a major determining role on store loyalty across different complex contexts. Addressing these issues, Bettina Berg analyzes first whether corporate reputation and retail store equity have a reciprocal relationship in determining store loyalty. Second, she evaluates whether retail brand equity or store accessibility provides a greater contribution to store loyalty across different local competitive situations. Third, she investigates whether perceptions of format specific core attributes differ in their impact on the brand building process in saturated and emerging[...]

Features

Marketers and retailers have to understand how to manage different consumer perception levels of retail brands, which have a major determining role on store loyalty across different complex contexts. Addressing these issues, Bettina Berg analyzes first whether corporate reputation and retail store equity have a reciprocal relationship in determining store loyalty. Second, she evaluates whether retail brand [...]

Contents

Managing Retail Brands Across Different Consumer Perception Levels.- Reciprocal Effects of the Corporate Reputation and Store Equity of Retailers.- Managing retail brands in the light of different local competitive contexts.- Importance of Retail Brand Equity and Store Accessibility for Store Loyalty in Local Competition.- Managing Retail Brands Within Different Retail Formats in an International Context.- A Comparison Study in Germany and Romania on the International Transfer and Perception of Retail Formats.

Fields of interest

Marketing

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-658-01595-4

Softcover

2014. XIX, 180 p. 9 illus. (Handel und Internationales Marketing / Retailing and International Marketing)

\$79.99

ISBN 978-3-658-01595-4

usually dispatched within 3 to 5 business days

S. Elsner, Universität Trier, Trier, Germany

Retail Internationalization

Analysis of Market Entry Modes, Format Transfer and Coordination of Retail Activities

The doctoral thesis investigates various strategies in the area of going and being international of retail firms which is of undisputable relevance due to the fairly narrow research status and the increasing internationalization of retail activities. Issues are investigated concerning the choice of retail market entry modes, i.e., the form of institutional arrangements that retailers use when entering foreign markets, the retail format transfer, i.e., the management of internal processes and the external marketing program elements and the coordination of retail activities, i.e., the implementation of the marketing program by the organizational structure. Regarding this, three[...]

Features

Retail internationalization is gaining importance in retail practice, but the research status is still fairly narrow. Stefan Elsner aims to close this gap by investigating three important challenges within the retail internationalization process: the appropriate choice of market entry modes, the successful retail format transfer and the successful organizational structure abroad. Based on substantial [...]

Contents

Internationalization.- Retailing.- Entry mode choice.- Format transfer.- Standardization and adaptation.- Organizational Structure.

Fields of interest

Marketing

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-658-01095-9

Softcover

2014. XXI, 199 p. 10 illus. (Handel und Internationales Marketing / Retailing and International Marketing)

\$79.95

ISBN 978-3-658-01095-9

usually dispatched within 3 to 5 business days

S. Shah, SSSIHL, Prasanthi Nilayam, Anantapur, India; V.E. Ramamoorthy, SSSIHL, Prasanthi Nilayam, Anantapur, India

Soulful Corporations

A Values-Based Perspective on Corporate Social Responsibility

In the light of multiple corporate debacles, financial crises and environmental disasters across the globe, the need for corporate goals to transition from simply maximising shareholder wealth to optimising stakeholder welfare is being echoed in various quarters. This book makes a distinct contribution by looking at Corporate Social Responsibility (CSR) from a values-based perspective with a focus on providing a balance between corporate success and social well-being. The book emphasizes that corporations need to redefine their purposes to co-create long-term, sustainable and win-win solutions for multiple stakeholders through mutually-fulfilling and value-adding collaborative efforts.[...]

Features

Corporate debacles, financial and economic crises and environmental disasters in different parts of the globe over the last two decades are seen as indicators for a transformation in business conduct by scholars and practitioners alike. A need for corporate goals to move on from simply maximizing shareholder profit to optimizing stakeholder welfare is being echoed in various quarters. Upon this backdrop, this [...]

Contents

The World Today: Paradoxes Galore.- Corporate Misdeemeanour: The Business of Business is Business?.- Redefining Globalisation: Is a Better World Possible?.- Coping with Globalisation: A Quarter Century of Efforts.- Business Responsibility through the Ages: A Journey from Scriptural Insights, with Noble Philanthropists, to Committed Institutions and Leaders.- Corporate Social Responsibility: Can Companies Make a Difference?.- Corporate Social Responsibility: The Indian Story comes a Full Circle.- Corporate Citizenship: How can Companies be Good Citizens?.- Socially Responsible Investing:[...]

Fields of interest

Non-Profit Enterprises/Corporate Social Responsibility; Social Policy; Ethics; Public Finance & Economics; Emerging Markets/Globalization; Organization / Planning

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-81-322-1274-4

Hardcover

2014. LXVI, 608 p. 55 illus. (India Studies in Business and Economics)

\$99.00

ISBN 978-81-322-1274-4

usually dispatched within 3 to 5 business days

R. Vielhaber, Dr. Hans Fuchs GmbH, Berlin, Germany (Ed.)

TOPs International

Best Banks for International Wealth Management

Der Ruf der Schweiz mag in Europa und den USA gelitten haben, in anderen Weltteilen ist er nach wie vor untadelig. Das Land gilt als politisch und ökonomisch stabil, das dort deponierte Vermögen als sicher vor staatlichen Willkürakten. Hochvermögende Kunden – etwa aus Asien – wollen nicht nur erstklassige Finanzdienstleistungsservices erhalten, sondern auch in ihrer jeweiligen kulturellen Eigenart angenommen werden. Die gar nicht so zahlreichen international ausgerichteten Anbieter an den Finanzplätzen Genf und Zürich versprechen in dieser Hinsicht viel. Doch halten sie es auch? Haben sie neben einem weltweiten Netzwerk auch die interkulturelle Kompetenz, die Hochvermögende erwarten? [...]

Features

Der Ruf der Schweiz mag in Europa und den USA gelitten haben, in anderen Weltteilen ist er nach wie vor untadelig. Das Land gilt als politisch und ökonomisch stabil, das dort deponierte Vermögen als sicher vor staatlichen Willkürakten. Hochvermögende Kunden – etwa aus Asien – wollen nicht nur erstklassige Finanzdienstleistungsservices erhalten, sondern auch in ihrer jeweiligen kulturellen Eigenart angenommen [...]

Contents

Rahmenbedingungen.- Der Markt 2014.- Highlights.- Ranking.- Porträts.- PBPI.

Fields of interest

Finance / Banking

Target groups

Professional/practitioner

Type of publication

GWV Special Issue

More on www.springer.com/978-3-943124-27-9

Softcover

2013. Approx. 25 p. 10 illus., 5 illus. in color.

\$49.99

ISBN 978-3-943124-27-9

Due: October 15, 2013

C. Murdock

Tax Insight

For Tax Year 2013 and Beyond

Tax Insight: For Tax Year 2013 and Beyond - will teach you to take control of life's biggest expense#taxes. In your lifetime, you will spend more money on taxes than on anything else. Despite that fact, you likely know the current prices of movies and milk but don't know what your marginal tax rate is. You know where to get the cheapest gallon of gas to save a buck or two, but you don't give a thought to the tax strategies you should be using right now that would save you thousands. Why? Is it too complicated and confusing? Too unpleasant? In Tax Insight, tax expert Casey Murdock opens up the world of taxes with amazing clarity and simplicity. As you will discover, you have within [...]

Features

Tax Insight: For Tax Year 2013 and Beyond - will teach you to take control of life's biggest expense#taxes. In your lifetime, you will spend more money on taxes than on anything else. Despite that fact, you likely know the current prices of movies and milk but don't know what your marginal tax rate is. You know where to get the cheapest gallon of gas to save a buck or two, but you [...]

Fields of interest

Business & Management Science

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-6310-4

Softcover

2014. 376 p.

\$29.99

ISBN 978-1-4302-6310-4

usually dispatched within 3 to 5 business days

M. Sanchis i Marco

The Economics of the Monetary Union and the Eurozone Crisis

A regulatory idea conducted this work: the need to connect the economic rationale of the theory of currency areas with the current EU institutional frame of the European monetary unification process. The latter includes the recent revamping of fiscal rules of the Stability and Growth Pact, and calls for enhancing 'flexicurity' in EU labour markets. The lack of EU political leadership is a dead-weight loss to build a genuine economic and monetary union, and risks to blow-up the whole project. Further, it undermines the internal macroeconomic logic of a single currency like the euro, and gives a prominent non-democratic role to financial markets. As it happened in the past with the [...]

Features

A regulatory idea conducted this work: the need to connect the economic rationale of the theory of currency areas with the current EU institutional frame of the European monetary unification process. The latter includes the recent revamping of fiscal rules of the Stability and Growth Pact, and calls for enhancing 'flexicurity' in EU labour markets. The lack of EU political leadership is a dead-weight loss to [...]

Contents

The Economics of Monetary Union: the Theory of Optimum Currency Areas (OCAs).- The Economic Rationale of Fiscal Rules in OCAs: The SGP and the EDP.- To Cope with Asymmetric Shocks in EMU: The Role of Labour Market Flexibility.- The Concept of Labour Market Flexicurity in the Eurozone.- The Spanish Case: The Housing Market Bubble and External Disequilibria.- The Global Crisis and Alternative Scenarios to Save the Euro: A Spanish Perspective.- Appendix: Ideology and Economics in the Failure of Lehman Brothers.

Fields of interest

Macroeconomics / Monetary Economics; European Integration; International Economics; Labor Economics; Public Finance & Economics

Target groups

Graduate

Type of publication

Brief

More on www.springer.com/978-3-319-00019-0

Softcover

2014. XIII, 109 p. 14 illus., 12 illus. in color. (Springer-Briefs in Economics)

\$49.95

ISBN 978-3-319-00019-0

usually dispatched within 3 to 5 business days

J.-P. Aubin

Time and Money

How Long and How Much Money is Needed to Regulate a Viable Economy

This authored monograph presents an unconventional approach to an important topic in economic theory. The author is an expert in the field of viability theory and applies this theory to analyze how an economy should be dynamically endowed so that it is economically viable. Economic viability requires an assumption on the joint evolution of transactions, fluctuations of prices and units of numeraire goods: the sum of the "transactions values" and the "impact of price fluctuations" should be negative or equal to zero. The book presents a computation of the minimum endowment which restores economic viability and derives the dynamic laws that regulate both transactions and price[...]

Features

This authored monograph presents an unconventional approach to an important topic in economic theory. The author is an expert in the field of viability theory which was motivated by economics at the end of the 1970's (see Dynamic Economic Theory: a Viability Approach, Springer, (1996)). It is used here to analyze how an economy should be dynamically endowed so that it is economically [...]

Contents

The Underlying Thesis.- How Long and How Much Endowing One Commodity.- Keeping the Endowment Above a Viability Threshold.- Uncertain Endowments and Economic Cycles.- Evolutions and their Temporal Windows.- Endowing Fundamental Values:Willingness To Pay.- Endowing Exchange Values: Adam Smith's Invisible Man.- Why Viability Theory?.- What Is to Be Done?.

Fields of interest

Economic Theory; Calculus of Variations and Optimal Control; Optimization; Socio- and Economics, Population and Evolutionary Models; Complex Systems; Macroeconomics / Monetary Economics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00004-6

Softcover

2014. XVIII, 144 p. 32 illus., 29 illus. in color. (Lecture Notes in Economics and Mathematical Systems, Vol. 670)

\$89.99

ISBN 978-3-319-00004-6

usually dispatched within 3 to 5 business days

C. Duncan

Unite the Tribes

Leadership Skills for Technology Managers

Every day, customers see the results of companies where fiefdoms have formed and silos create divisional or departmental strife: poor sales and profits, and lackluster products. It's not hard to see that such companies are headed for an early grave.

Regardless of the manner in which company fractures manifest themselves, tech leaders must find a way to rid their workplaces of the divisions that threaten to undermine their company's productivity, profits, and survival. That's why, in *Unite the Tribes: Leadership Skills for Technology Managers*, Christopher Duncan, bestselling author of *The Career Programmer*, provides corporate leaders with a ten-point plan for joining their[...]

Features

Every day, customers see the results of companies where fiefdoms have formed and silos create divisional or departmental strife: poor sales and profits, and lackluster products. It's not hard to see that such companies are headed for an early grave.

Regardless of the manner in which company fractures manifest themselves, tech leaders must find a way to rid their workplaces of the divisions [...]

Fields of interest

Business & Management Science

Target groups

Popular/general

Type of publication

Professional book

More on www.springer.com/978-1-4302-5872-8

Softcover

2013. 244 p.

\$29.99

ISBN 978-1-4302-5872-8

usually dispatched within 3 to 5 business days

Education

X. Yang, School of Mathematics and Statistics, Chongqing, China (P.R.)

Conception and Characteristics of Expert Mathematics Teachers in China

The superior performance of East Asian students in recent international studies of mathematics achievement has attracted the attention of educators and policy makers worldwide. Xinrong Yang focuses on exploring how an expert mathematics teacher is conceptualized by mathematics educators in China and the characteristics that expert mathematics teachers share. The author adopts a sociocultural theory and a prototypical view of conception in this study of teacher expertise and shows that some of the roles expected to be played by expert mathematics teachers in China, such as being at the same time a researcher, a mentor, an expert in examination, and an exemplary model, are quite[...]

Features

The superior performance of East Asian students in recent international studies of mathematics achievement has attracted the attention of educators and policy makers worldwide. Xinrong Yang focuses on exploring how an expert mathematics teacher is conceptualized by mathematics educators in China and the characteristics that expert mathematics teachers share. The author adopts a sociocultural theory and a [...]

Contents

Conception of Expert Mathematics Teachers.- Beliefs and Knowledge of Expert Mathematics Teachers.- Classroom Teaching Practice and Sociocultural Influences.

Fields of interest

Mathematics Education

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-658-03096-4

Softcover

2014. XX, 321 p. 25 illus. (Perspektiven der Mathematikdidaktik)

\$109.00

ISBN 978-3-658-03096-4

usually dispatched within 3 to 5 business days

M. Gosper, Macquarie University, Sydney, Australia; D. Ifenthaler, Open Universities Australia, Melbourne, Australia (Eds.)

Curriculum Models for the 21st Century

Using Learning Technologies in Higher Education

Changing student profiles and the increasing availability of mainstream and specialized learning technologies are stretching the traditional face-to-face models of teaching and learning in higher education. Institutions, too, are facing far-reaching systemic changes which are placing strains on existing resources and physical infrastructure and calling into question traditional ways of teaching through lectures and tutorials. And, with an ever-increasing scrutiny on teaching and teachers' accountability for positive educational outcomes, the call for closer attention to learning, teaching and, most especially, to the design and delivery of the curriculum is given increasing relevance[...]

Features

Changing student profiles and the increasing availability of mainstream and specialized learning technologies are stretching the traditional face-to-face models of teaching and learning in higher education. Institutions, too, are facing far-reaching systemic changes which are placing strains on existing resources and physical infrastructure and calling into question traditional ways of teaching through [...]

Contents

Theoretical Considerations of Curriculum Mapping for the 21st Century.- Case Studies: moving beyond traditional practice, theoretical underpinnings for change, issues and implications arising from experience, future development and directions.- Technological and pedagogical innovations influencing curriculum renewal: emerging concepts and examples of best practice.- Sustainable educational practice in technology-rich environments.- Transforming new ideas and practices into curriculum models.- Finding and developing resources for curriculum transformation.- Integrating innovation into[...]

Fields of interest

Curriculum Studies; Pedagogic Psychology; Educational Technology; Learning and Instruction

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7365-7

Hardcover

2014. XXVI, 444 p. 38 illus., 8 illus. in color.

\$179.00

ISBN 978-1-4614-7365-7

usually dispatched within 3 to 5 business days

B. Hokanson, University of Minnesota, St. Paul, USA; A. Gibbons (Eds.)

Design in Educational Technology

Design Thinking, Design Process, and the Design Studio

This book is the result of a research symposium sponsored by the Association for Educational Communications and Technology [AECT]. The fifteen chapters were developed by leaders in the field and represent the most updated and cutting edge methodology in the areas of instructional design and instructional technology. The broad concepts of design, design thinking, the design process, and the design studio, are identified and they form the framework of the book. This book advocates the conscious adoption of a mindset of design thinking, such as that evident in a range of divergent professions including business, government, and medicine. At its core is a focus on "planning, inventing, [...]"

Features

This volume, representing the best papers presented at the 2012 AECT Summer Research Symposium, focuses on the conscious adoption of aspects of design thinking, evident in a range of divergent professions (including business, government, and medicine), extended to the field of education. Design thinking is future oriented, concerned with "the conception and realization of new things," and at its core is [...]

Contents

Introduction.- Design, Designers and Reflection-in-Action.- Eight Views of Instructional Design and What They Should Mean to Instructional Designers.- Critical Issues in Studio Pedagogy: Beyond the Mystique and Down to Business.- In Education We All Want to Be Nice: Lessons Learned from a Multidisciplinary Design Studio.- Instructional Design in a Studio Environment: What Happens When Design Meets Hollywood?.- Understanding and Examining Design in Action with Cultural Historical Activity Theory.- Instructional Design Cases: Documenting precedent in instructional design.- The Many[...]

Fields of interest

Educational Technology; Learning and Instruction

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-319-00926-1

Hardcover

2014. X, 273 p. 27 illus., 6 illus. in color. (Educational Communications and Technology: Issues and Innovations, Vol. 1)

\$129.00

ISBN 978-3-319-00926-1

usually dispatched within 3 to 5 business days

V.C.H. Tong (Ed.)

Geoscience Research and Education

Teaching at Universities

Focusing on geoscience, this book applies a uniquely cross-disciplinary perspective to its examination of the relationship between scientific research and teaching at universities. Contributions show how the use of technology and innovative pedagogical design allows students at different stages of their university studies to develop skills and experience in geoscience research. The book offers wide-ranging insight from academics in geoscience, science education and higher education policy and pedagogy, as well as from students and industry experts. The opening section sets the context, with a chapter on teaching and research in the contemporary university by a world-leading academic[...]

Features

Focusing on geoscience, this book applies a uniquely cross-disciplinary perspective to its examination of the relationship between scientific research and teaching at universities. Contributions show how the use of technology and innovative pedagogical design allows students at different stages of their university studies to develop skills and experience in geoscience research. The book offers wide-ranging [...]

Contents

PART I: INTRODUCTION.- 1. The context.- From research-implicit to research-enhanced teaching: A geoscience perspective, Vincent C. H. Tong.- Teaching and research in the contemporary university, Simon Marginson.- PART II: RESEARCH-TEACHING NEXUS IN GEOSCIENCE.- 2. Perspectives.- The challenge of combining research and teaching: A young geoscientist's perspective, Laura J. Cobden.- Incorporating research into teaching geosciences: the Masters student's perspective, Barbara McNutt.- Teaching on the High Seas: How Field Research Enhances Teaching at All Levels, Ken C. Macdonald.- 3.[...]

Fields of interest

Science Education; Earth Sciences (general); Educational Technology; Higher Education

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-6945-8

Hardcover

2014. IX, 304 p. 69 illus., 60 illus. in color. (Innovations in Science Education and Technology, Vol. 20)

\$129.00

ISBN 978-94-007-6945-8

usually dispatched within 3 to 5 business days

V.C.H. Tong, University of London, UK, London, United Kingdom (Ed.)

Geoscience Research and Outreach

Schools and Public Engagement

From energy and water resources to natural disasters, and from changing climatic patterns to the evolution of the Earth's deep interior, geoscience research affects people's lives in many ways and on many levels. This book offers a stimulating cross-disciplinary perspective on the important relationship between geoscience research and outreach activities for schools and for the general public. The contributors – academics, research scientists, science educators and outreach program educators – describe and evaluate outreach programs from around the world. A section entitled Field-based Approaches includes a chapter describing an initiative to engage Alaskan communities and students in[...]

Features

From energy and water resources to natural disasters, and from changing climatic patterns to the evolution of the Earth's deep interior, geoscience research affects people's lives in many ways and on many levels. This book offers a stimulating cross-disciplinary perspective on the important relationship between geoscience research and outreach activities for schools and for the general public. The [...]

Contents

PART I: INTRODUCTION.- 1. The context.- Geoscience and educational research in outreach activities, Vincent C. H. Tong.- Perceptions of time matter: the importance of geoscience outreach, Samuel A. Bowring.- PART II: LINKING GEOSCIENCE RESEARCH AND OUTREACH.- 2. Field-based approaches.- Engaging Alaska Communities and Students in Cryospheric Research, Kenji Yoshikawa and Elena B. Sparrow.- The Salish Sea Expedition: Walking the Gangplank of Science Outreach, K. Westnedge and A. Dallimore.- Problem-based learning in the field setting, Lung Sang Chan and Loretta M. W. Ho.- 3. Online[...]

Fields of interest

Science Education; Earth Sciences (general); Educational Technology; Higher Education

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-6942-7

Hardcover

2014. IX, 340 p. 95 illus., 69 illus. in color. (Innovations in Science Education and Technology, Vol. 21)

\$129.00

ISBN 978-94-007-6942-7

usually dispatched within 3 to 5 business days

C. Reid, Centre for Educational Research, Penrith, NSW, Australia; J. Collins, University of Technology Sydney, Broadway, NSW, Australia; M. Singh

Global Teachers, Australian Perspectives

Goodbye Mr Chips, Hello Ms Banerjee

This is the first book on global teachers and the increasingly important phenomenon of 'brain circulation' in the global teaching profession. A teaching qualification is a passport to an international professional career: the global teacher is found in more and more classrooms around the world today. It is a two-way movement. This book looks at the growing importance of immigrant teachers in western countries today and at teachers who exit from western countries (emigrant teachers) seeking teaching experience in other countries. Drawing on the international literature in Europe, North America, Asia and elsewhere supplemented by rich insights derived from recent Australian research,[...]

Features

This is the first book on global teachers and the increasingly important phenomenon of 'brain circulation' in the global teaching profession. A teaching qualification is a passport to an international professional career: the global teacher is found in more and more classrooms around the world today. It is a two-way movement. This book looks at the growing importance of immigrant teachers in western [...]

Contents

Introduction.- Chapter 1) Introduction.- Chapter 2) Globalizing Teachers: policy and theoretical dimensions.- Chapter 3) Immigrant Teachers in Australia: Quantitative Insights.- Chapter 4) Global Teachers' Pathways to Australia.- Chapter 5) The Capital Reconversion of Global Teachers in Australia.- Chapter 6) Internationally Educated Teachers' Critiques of Tests of their Employability.- Chapter 7) Global Teachers Living and Teaching in Australia.- Chapter 8) Goodbye 'Mr Chips': the global mobility of Australian-educated teachers.- Chapter 9) Revisiting Ms Banerjee and Mr Chips.

Fields of interest

Sociology of Education; Migration; Educational Policy and Politics; Teaching and Teacher Education

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-981-4451-35-2

Hardcover

2014. XIII, 186 p. 42 illus.

\$129.00

ISBN 978-981-4451-35-2

usually dispatched within 3 to 5 business days

J. Knight, University of Toronto, Toronto, Canada (Ed.)

International Education Hubs

Student, Talent, Knowledge-Innovation Models

Education hubs are the newest development in the international higher education landscape. Countries, zones and cities are trying to position themselves as reputed centres for higher education and research.

But given higher education's current preoccupation with competitiveness, branding, and economic benefits are education hubs merely a fad, a branding exercise, or are they an important innovation worthy of serious investment and attention? This book tries to answer the question through a systematic and comparative analysis of the rationales, actors, policies, plans and accomplishments for six serious country level education hubs - United Arab Emirates, Qatar, Malaysia, Hong Kong,[...]

Features

Education hubs are the newest development in the international higher education landscape. Countries, zones and cities are trying to position themselves as reputed centres for higher education and research.

But given higher education's current preoccupation with competitiveness, branding, and economic benefits are education hubs merely a fad, a branding exercise, or are they an important [...]

Contents

Dedication.- 1. Introduction; Jane Knight.- 2. Understanding Education Hubs within the Context of Crossborder Education; Jane Knight.- 3. An Analytical Framework for Education Hubs: Student, Talent, Knowledge-Innovation; Jane Knight and Jack Lee.- 4. The Evolution of Qatar as an Education Hub: Moving to a Knowledge Economy; Arwa Ibnouf, Lois Dou and Jane Knight.- 5. United Arab Emirates Education Hub: A Decade of Development; Warren Halsey Fox and Sabha Al Shamisi.- 6. Hong Kong: The Quest for Regional Education Hub Status; Ka Ho Mok and Peter Bodycott.- 7. Malaysia: Becoming an[...]

Fields of interest

International and Comparative Education; Higher Education; Educational Policy and Politics

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7024-9

Hardcover

2014. VIII, 251 p. 4 illus.

\$129.00

ISBN 978-94-007-7024-9

usually dispatched within 3 to 5 business days

S. Blömeke, Humboldt-Universität zu Berlin, Berlin, Germany; F.-J. Hsieh, National Taiwan Normal University, Taipei, Taiwan; G. Kaiser, University of Hamburg, Hamburg, Germany; W.H. Schmidt, Michigan State University, East Lansing, USA (Eds.)

International Perspectives on Teacher Knowledge, Beliefs and Opportunities to Learn

TEDS-M Results

This book offers results from the comparative "Teacher Education and Development Study – Learning to Teach Mathematics (TEDS-M)". Carried out under the auspices of the International Association for the Evaluation of Educational Achievement (IEA), more than 23,000 mathematics teachers at the primary and lower secondary levels from 16 countries were tested at the end of the teacher education on their mathematics and mathematics pedagogical content knowledge as well as surveyed on their beliefs and their opportunities to learn. In addition, representative samples of teacher educators and training institutions were surveyed. TEDS-M analyses in particular the relationship between teacher[...]

Features

This book presents a collection of papers that examine the TEDS-M data results in terms of knowledge and beliefs, the relationship between opportunities to learn during teacher education and outcomes, as well as the relationship between the future teachers' background and teacher education outcomes. TEDS-M, under the auspices of the International Association for the Evaluation of Educational Achievement [...]

Contents

1. Introduction: State of research, framework and design of TEDS-M: S. Blömeke, F.-J. Hsieh, G. Kaiser & W. H. Schmidt.- 2. Teacher knowledge at the end of teacher education: International perspectives.- 2.1 Teacher education effectiveness: Quality and equity of future primary teachers' mathematics content and mathematics pedagogical content knowledge: S. Blömeke, U. Suhl & G. Kaiser.- 2.2 Teacher education effectiveness: Quality and equity of future lower secondary teachers' mathematics content and mathematics pedagogical content knowledge: W. H. Schmidt et al.- 2.3 Teacher education[...]

Fields of interest

Teaching and Teacher Education; Mathematics Education; International and Comparative Education; Educational Policy and Politics

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-6436-1

Hardcover

2014. IX, 592 p. 132 illus. (Advances in Mathematics Education)

\$179.00

ISBN 978-94-007-6436-1

usually dispatched within 3 to 5 business days

V.M. Warfield

Invitation to Didactique

This is an introduction to a Didactique, research program that has been going on in France since the '70s and whose importance is now widely recognized, but whose content is still not easy access to anglophones. The work of Dr. Guy Brousseau has remained largely, in his native France, untranslated and largely unknown. This book will unlock the secrets of Didactique and provide an opportunity for researchers, teacher educators, and students to learn of this important methodology.

Features

Didactique is a research program in mathematics education that was launched in France in the 60's and now engages many researchers, from graduate students to senior professors. Until the 90's, almost none of its ideas and results were available to Anglophones. Since that time, a book and some articles have been published in English, but they tend to be accessible only to those who already have some [...]

Contents

1. Basic elements of Didactique.- 2. Two illustrative examples.- 3. A fundamental situation for statistics.- 4. Gael and the didactical contract.- 5. Glossary.- Index.- Bibliography.

Fields of interest

Education (general); Mathematics Education

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8198-0

Softcover

Originally published by XLibris, Bloomington, Indiana, USA, 2007

2014. XV, 74 p. 7 illus. (SpringerBriefs in Education, Vol. 30)

\$54.99

ISBN 978-1-4614-8198-0

usually dispatched within 3 to 5 business days

R.M. Jimenez Catalan (Ed.)

Lexical Availability in English and Spanish as a Second Language

This volume contributes to the research in two different research areas: lexical availability studies and vocabulary research in second or foreign languages. Lexical availability is defined as the words that immediately come to mind as a response to a stimulus provided by topics related to domains closely connected to daily life: for instance animals, food and drink, daily activities, politics, or poverty. Lexical availability is a dimension of learners' receptive and productive lexical competence, and, consequently, an important variable of learners' communicative competence. Written by leading researchers in Spanish and English applied linguistics, the studies presented in this[...]

Features

This volume contributes to the research in two different research areas: lexical availability studies and vocabulary research in second or foreign languages. Lexical availability is defined as the words that immediately come to mind as a response to a stimulus provided by topics related to domains closely connected to daily life: for instance animals, food and drink, daily activities, politics, or poverty. [...]

Contents

Preface.- 1. Lexical Availability Studies.- Part I.- 2. Lexical Availability of Basic and Advanced Semantic Categories in English L1 and English L2.- 3. The Effect of Age on EFL Learners' Lexical Availability: Word Responses to the Cue Words 'Town' and 'Countryside'.- 4. The Incidence of Previous Foreign Language Contact in a Lexical Availability Task. A Study of Senior Learners.- 5. Lexical Variation in Learners' Responses to Cue Words: The Effect of Gender.- 6. Frequency Profiles of EFL Learners' Lexical Availability.- Part II.- 7. The Relationship of Language Proficiency to[...]

Fields of interest

Language Education; Applied Linguistics; Literacy; Psycholinguistics

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7157-4

Hardcover

2014. XIV, 205 p. 25 illus., 11 illus. in color. (Educational Linguistics, Vol. 17)

\$129.00

ISBN 978-94-007-7157-4

usually dispatched within 3 to 5 business days

U.-D. Ehlers, Baden-Wuerttemberg Cooperative, Stuttgart, Germany

Open Learning Cultures

A Guide to Quality, Evaluation, and Assessment for Future Learning

Today we are seeing a new form of blended learning: not only is technology enhancing the learning environment but formal and informal learning are combining and there is self- and peer-assessment of results. Open learning cultures are challenging the old and long-practiced methods used by educators and transforming learning into a more student-driven and independent activity, which uses online tools such as blogs, wikis or podcasts to connect resources, students and teachers in a novel way. While in higher education institutions most assessments are still tied to formal learning scenarios, teachers are more and more bound to recognize their students' informal learning processes and [...]

Features

Today we are seeing a new form of blended learning: not only is technology enhancing the learning environment but formal and informal learning are combining and there is self- and peer-assessment of results. Open learning cultures are challenging the old and long-practiced methods used by educators and transforming learning into a more student-driven and independent activity, which uses online tools such [...]

Fields of interest

Assessment, Testing and Evaluation; Computers and Education; Educational Technology; Personnel Management; Computers and Society

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-3-642-38173-7

Hardcover

2013. XVIII, 239 p. 38 illus.

\$89.99

ISBN 978-3-642-38173-7

usually dispatched within 3 to 5 business days

M. Papastephanou (Ed.)

Philosophical Perspectives on Compulsory Education

From antiquity to the present, schools of some form have, in one way or other, been involved in the material and symbolic reproduction of societies. Such diachronic resilience, along with the synchronic omnipresence of schooling often makes schools appear as natural, self-evident and unavoidable. This naturalization of schooling is then extended to its modern specification as compulsory in a universalist fashion. This book does not only seek to explore what is left of older debates on compulsory education in the years' hindsight but also to associate the discussion of schooling with new theoretical developments and new emphases. It contains a first part, which operates, primarily, at [...]

Features

Contributions to this volume from diverse perspectives explore pedagogical practices of the contemporary world, namely the school. Themes of autonomy, authority and liberalism are surfaced in the debates and highly innovative insights presented in this book where philosophical perspectives shed light on the theoretical underpinnings of formal education and schooling. How we interpret the self, humanity and [...]

Contents

Acknowledgements.- Editor's Introduction.- Part One: The General, Theoretical Challenges.- Chapter One: Volker Kraft, 'Constants of Education'.- Chapter Two: Robin Barrow, 'Compulsory Common Schooling and Individual Difference'.- Chapter Three: Geoffrey Hinchliffe, 'Education, Liberty and Authority: justifying compulsory education'.- Chapter Four: Kevin Williams, 'Compulsion and Education as a Conversation: Are they compatible?'.- Chapter Five: Naoko Saito, 'Compulsion without Coercion: liberal education through uncommon schooling'.- Chapter Six: Anders Schinkel, 'On the justification [...]

Fields of interest

Educational Policy and Politics; Educational Philosophy; Philosophy of Education

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7310-3

Hardcover

2014. XII, 191 p. 6 illus.

\$129.00

ISBN 978-94-007-7310-3

usually dispatched within 3 to 5 business days

B. Wattchow, R. Jeanes, L. Alfrey, T. Brown, A. Cutter Mackenzie, J. O'Connor (Eds.)

The Socioecological Educator

A 21st Century Renewal of Physical, Health, Environment and Outdoor Education

This volume offers an alternative vision for education and has been written for those who are passionate about teaching and learning, in schools, universities and in the community, and providing people with the values, knowledge and skills needed to face complex social and environmental challenges. Working across boundaries the socio-ecological educator is a visionary who strives to build community connections and strengthen relationships with the natural world. The ideas and real-world case studies presented in this book will bring that vision a step closer to reality.

Features

This volume offers an alternative vision for education and has been written for those who are passionate about teaching and learning, in schools, universities and in the community, and providing people with the values, knowledge and skills needed to face complex social and environmental challenges. Working across boundaries the socio-ecological educator is a visionary who strives to build community [...]

Contents

1. Starting with stories: The power of socio-ecological narrative.- 2. Social ecology as education.- 3. Becoming a socio-ecological educator.- 4. The ambitions, processes and politics of socio-ecological curriculum reform: An Aotearoa-New Zealand case study.- 5. Through coaching: Examining sports coaching using a socio-ecological framework.- 6. Through community: Connecting classrooms to community.- 7. Through belonging: An early childhood perspective from a New Zealand preschool.- 8. Through adventure education: Using the socio-ecological model in adventure education to solve environmental [...]

Fields of interest

International and Comparative Education; Sociology of Education; Childhood Education; Teaching and Teacher Education

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7166-6

Hardcover

2014. XV, 231 p. 8 illus., 6 illus. in color.

\$129.00

ISBN 978-94-007-7166-6

usually dispatched within 3 to 5 business days

Engineering

H. Jin, Sandia National Laboratories, Livermore, USA; C. Sciammarella, Illinois Institute of Technology, Chicago, USA; S. Yoshida, Southeastern Louisiana University, Hammond, USA; L. Lamberti, Politecnico Di Bari, Bari, Italy (Eds.)

Advancement of Optical Methods in Experimental Mechanics, Volume 3

Conference Proceedings of the Society for Experimental Mechanics Series

Advancement of Optical Methods in Experimental Mechanics: Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics, the third volume of eight from the Conference, brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on a wide range of optical methods ranging from traditional photoelasticity and interferometry to more recent DIC and DVC techniques, and includes papers in the following general technical research areas: Optical metrology and displacement measurements at different scales Digital holography and experimental mechanics Optical measurement systems using polarized[...]

Features

This critical collection examines a range of optical methods ranging from traditional photoelasticity and interferometry to more recent DIC and DVC techniques, as presented in early findings and case studies from the Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics. The collection includes papers in the following general technical research areas: • Optical metrology and [...]

Contents

From the Contents: Super-resolution in Ultrasonic NDE.- Relative Two-dimensional Nanoparticle and Collagen Concentration Measurements Using Scanned Laser Pico-projection.- High-speed Shape Measurement With 4 kHz Using Linear LED Device.- Deconvolving Strain Maps Obtained With the Grid Method.- Advanced Test Simulator to Reproduce Experiments at Small and Large Deformations.- The Eigenfunction Virtual Fields Method.- Keynote: The Kinematics and Dynamics of 3-D Displacement Fields (40-min.).- Shape Measurement Using a New 3D-DIC Algorithm That Preserves Sharp Edges.- Three-dimensional[...]

Fields of interest

Nanotechnology and Microengineering; Theoretical and Applied Mechanics; Nanotechnology

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-00767-0

Hardcover

2014. IX, 387 p. 363 illus., 251 illus. in color. (Conference Proceedings of the Society for Experimental Mechanics Series)

\$199.00

ISBN 978-3-319-00767-0

usually dispatched within 3 to 5 business days

T.W. Simpson, Pennsylvania State University, University Park, USA; J.(. Jiao, Georgia Institute of Technology, Atlanta, USA; Z. Siddique, University of Oklahoma, Norman, USA; K. Hölttä-Otto (Eds.)

Advances in Product Family and Product Platform Design

Methods & Applications

Advances in Product Family and Product Platform Design: Methods & Applications highlights recent advances that have been made to support product family and product platform design along with successful applications in industry. This book provides not only motivation for product family and product platform design (i.e., address questions about “why and when should we platform”) but also methods and tools to support the design and development of families of products based on shared platforms (i.e. address the “how” and “what” questions about platforming). It begins with a general overview of product family design to introduce the general reader to the topic and then progress to more[...]

Features

Advances in Product Family and Product Platform Design: Methods & Applications highlights recent advances that have been made to support product family and product platform design and successful applications in industry. This book provides not only motivation for product family and product platform design—the “why” and “when” of platforming—but also methods and tools to support the design and [...]

Contents

Preface.- 1. Recent Advancements in Product Family Design and Platform-based Product Development.- Part I: Platform Planning and Strategy.- 2. Crafting Platform Strategy based on Anticipated Benefits and Costs.- 3. Multidisciplinary Domains Association in Product Family Design.- 4. Modular Function Deployment – Using Module Drivers to Impart Strategies to a Product Architecture.- 5. Emphasizing Reuse of Generic Assets through Integrated Product and Production System Development Platforms.- 6. Quantifying the Relevance of Product Feature Classification in Product Family Design.- 7.[...]

Fields of interest

Industrial and Production Engineering; Production / Logistics; Engineering Design; Manufacturing, Machines, Tools

Target groups

Professional/practitioner

Type of publication

Monograph

More on www.springer.com/978-1-4614-7936-9

Hardcover

2014. XVIII, 819 p. 316 illus., 149 illus. in color.

\$229.00

ISBN 978-1-4614-7936-9

usually dispatched within 3 to 5 business days

Th.C. Henderson

Analysis of Engineering Drawings and Raster Map Images

This book covers up-to-date methods and algorithms for the automated analysis of engineering drawings and digital cartographic maps. The Non-Deterministic Agent System (NDAS) offers a parallel computational approach to such image analysis. The book describes techniques suitable for persistent and explicit knowledge representation for engineering drawings and digital maps. It also highlights more specific techniques, e.g., applying robot navigation and mapping methods to this problem. Also included are more detailed accounts of the use of unsupervised segmentation algorithms to map images. Finally, all these threads are woven together in two related systems: NDAS and AMAM (Automatic[...])

Features

This book covers up-to-date methods and algorithms for the automated analysis of engineering drawings and digital cartographic maps. The Non-Deterministic Agent System (NDAS) offers a parallel computational approach to such image analysis. The book describes techniques suitable for persistent and explicit knowledge representation for engineering drawings and digital maps. It also highlights more specific [...]

Contents

Introduction.- Segmentation and Vectorization.- Text and Graphics Analysis in Engineering Drawings.- A Structural Model for Engineering Drawings.- Non-Deterministic Analysis Systems (NDAS).- Map Background and Form Separation.- Road and Road Intersection Extraction.- Other Semantic Feature Segmentation.- Rewrite Rules for Grammar G.- MNDAS User Manual.- Color Information from Legend of USGS Map.

Fields of interest

Signal, Image and Speech Processing; Computer Imaging, Vision, Pattern Recognition and Graphics; Image Processing and Computer Vision; Remote Sensing / Photogrammetry

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4419-8166-0

Hardcover

2014. XII, 241 p. 214 illus.

\$129.00

ISBN 978-1-4419-8166-0

usually dispatched within 3 to 5 business days

M. Iguchi, Hokkaido University, Sapporo, Japan; O.J. Ilegbusi, University of Central Florida, Orlando, USA

Basic Transport Phenomena in Materials Engineering

This book presents the basic theory and experimental techniques of transport phenomena in materials processing operations. Such fundamental knowledge is highly useful for researchers and engineers in the field to improve the efficiency of conventional processes or develop novel technology. Divided into four parts, the book comprises 11 chapters describing the principles of momentum transfer, heat transfer, and mass transfer in single phase and multiphase systems. Each chapter includes examples with solutions and exercises to facilitate students' learning. Diagnostic problems are also provided at the end of each part to assess students' comprehension of the material. The book is aimed[...]

Features

This book presents the basic theory and experimental techniques of transport phenomena in materials processing operations. Such fundamental knowledge is highly useful for researchers and engineers in the field to improve the efficiency of conventional processes or develop novel technology. Divided into four parts, the book comprises 11 chapters describing the principles of momentum transfer, heat transfer, [...]

Contents

Momentum Transfer In Single-Phase Flows.- Basic Properties of Fluid Flow.- Momentum Transfer.- Special Topics in Fluid Mechanics.- Single Phase Heat Transfer.- Basic Principles of Heat Transfer.- One-Dimensional Heat Conduction.- Convection Heat Transfer.- Radiation Heat Transfer.- Mass Transfer.- Diffusion and Mass Transfer.- Multiphase Flow.- Gas-Liquid Two-Phase Flow.- Flows Involving Solid Phase.- Multiphase Flow in Micro-Scale Systems.

Fields of interest

Engineering Fluid Dynamics; Engineering Thermodynamics, Heat and Mass Transfer; Computational Mathematics and Numerical Analysis; Operating Procedures, Materials Treatment

Target groups

Graduate

Type of publication

Monograph

More on www.springer.com/978-4-431-54019-9

Hardcover

2014. XVII, 260 p. 163 illus., 41 illus. in color.

\$179.00

ISBN 978-4-431-54019-9

usually dispatched within 3 to 5 business days

O. Jamin, NXP Semiconductors, Caen cedex 9, France

Broadband Direct RF Digitization Receivers

This book discusses the trade-offs involved in designing direct RF digitization receivers for the radio frequency and digital signal processing domains. A system-level framework is developed, quantifying the relevant impairments of the signal processing chain, through a comprehensive system-level analysis. Special focus is given to noise analysis (thermal noise, quantization noise, saturation noise, signal-dependent noise), broadband non-linear distortion analysis, including the impact of the sampling strategy (low-pass, band-pass), analysis of time-interleaved ADC channel mismatches, sampling clock purity and digital channel selection. The system-level framework described is[...]

Features

This book discusses the trade-offs involved in designing direct RF digitization receivers for the radio frequency and digital signal processing domains. A system-level framework is developed, quantifying the relevant impairments of the signal processing chain, through a comprehensive system-level analysis. Special focus is given to noise analysis (thermal noise, quantization noise, saturation noise, [...]

Contents

RF Receiver Architecture State-of-the-Art.- System-Level Design Framework for Direct RF Digitization Receivers.- Application to the System Design of a Multi-Channel Cable Receiver.- Realization & Measurements.- Conclusions & Perspectives.

Fields of interest

Circuits and Systems; Signal, Image and Speech Processing; Processor Architectures

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01149-3

Hardcover

2014. XVI, 162 p. 166 illus., 68 illus. in color. (Analog Circuits and Signal Processing, Vol. 121)

\$129.00

ISBN 978-3-319-01149-3

usually dispatched within 3 to 5 business days

Y. Savoye

Cage-based Performance Capture

Nowadays, highly-detailed animations of live-actor performances are increasingly easier to acquire and 3D Video has reached considerable attentions in visual media production. In this book, we address the problem of extracting or acquiring and then reusing non-rigid parametrization for video-based animations. At first sight, a crucial challenge is to reproduce plausible boneless deformations while preserving global and local captured properties of dynamic surfaces with a limited number of controllable, flexible and reusable parameters. To solve this challenge, we directly rely on a skin-detached dimension reduction thanks to the well-known cage-based paradigm. First, we achieve[...]

Features

Nowadays, highly-detailed animations of live-actor performances are increasingly easier to acquire and 3D Video has reached considerable attentions in visual media production. In this book, we address the problem of extracting or acquiring and then reusing non-rigid parametrization for video-based animations. At first sight, a crucial challenge is to reproduce plausible boneless deformations while preserving [...]

Contents

General Introduction.- Sparse Constraints Over Animatable Subspaces.- Reusing Performance Capture Data.- Toward Non-Rigid Dynamic Cage Capture.

Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics); Image Processing and Computer Vision

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01537-8

Hardcover

2014. X, 141 p. 86 illus., 85 illus. in color. (Studies in Computational Intelligence, Vol. 509)

\$129.00

ISBN 978-3-319-01537-8

usually dispatched within 3 to 5 business days

B. Antoun, Sandia National Laboratories, Livermore, USA; H.J. Qi, University of Colorado, Boulder, USA; R. Hall, Air Force Research Laboratory, Wright-Patterson AFB, USA; G.P. Tandon, University of Dayton Research Institute, Dayton, USA; H. Lu, University of Texas-Dallas, Dallas, USA; C. Lu, University of Kentucky, Paducah, USA; J. Furmanskij, Los Alamos National Laboratory, Los Alamos, USA; A. Amirkhizi, University California San Diego, La Jolla, USA (Eds.)

Challenges In Mechanics of Time-Dependent Materials and Processes in Conventional and Multifunctional Materials, Volume 2

Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics

Challenges in Mechanics of Time-Dependent Materials and Processes in Conventional and Multifunctional Materials, Volume 2: Proceedings of the 2013 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the second volume of eight from the Conference, brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on fundamental and applied aspects of Experimental Mechanics, including papers in the following general technical research areas: Metallic, Polymeric and Composite Materials Effects of Extreme Environments including Radiation Resistance, Damage, and Aging Challenges in Time-dependent[...]

Features

This critical volume presents early findings and case studies on fundamental and applied aspects of Experimental Mechanics, as presented in the Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics. The collection includes papers in the following general technical research areas: • Metallic, Polymeric and Composite Materials Effects of [...]

Contents

Micromechanics of the Deformation and Failure Kinetics of Semicrystalline Polymers.- Stress-relaxation Behavior of Poly(methyl methacrylate) (PMMA) Across the Glass Transition Temperature.- The Effect of Stoichiometric Ratio on Viscoelastic Properties of Polyurea.- Dynamic Properties for Viscoelastic Materials over Wide Frequency Range.- Spatio-temporal Principal Component Analysis of Full-field Deformation Data.- Time-dependent Crack Initiation and Propagation From Notches in Ultrahigh Molecular Weight Polyethylene.- Master Creep Compliance Curve for Random Viscoelastic Material Properties.

Fields of interest

Nanotechnology and Microengineering; Theoretical and Applied Mechanics; Nanotechnology

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-00851-6

Hardcover

2014. VIII, 185 p. 145 illus., 67 illus. in color. (Conference Proceedings of the Society for Experimental Mechanics Series)

\$199.00

ISBN 978-3-319-00851-6

usually dispatched within 3 to 5 business days

B. Xu, J. Zeng, Institute of Quantitative & Technical, Beijing, China (P.R.); J. Watada, Waseda University, Kitakyushu, Japan

Changes in Production Efficiency in China

Identification and Measuring

Evaluating Production Efficiency in China examines production from engineering and statistics perspectives rather than from economics and mathematics perspectives. The authors present an observable benchmark as the criterion of the production efficiency to replace the unobservable production frontier surface. This book discusses several different computing technologies, controllable variable as a path of identification, changes in production efficiency by decision making on specific operating conditions, and optimal resource allocation. The book provides a channel to tap inside the success stories of China, exploiting the way of changes in production efficiency during China's [...]

Features

Evaluating Production Efficiency in China examines production from engineering and statistics perspectives rather than from economics and mathematics perspectives. The authors present an observable benchmark as the criterion of the production efficiency to replace the unobservable production frontier surface. This book discusses several different computing technologies, controllable variable as a path of [...]

Contents

Introduction.- Changes in Allocation Efficiency from Equity to Efficiency-Oriented.- Changes in Population Agglomeration Efficiency in Urban Planning.- Changes in Factors Scale Efficiency of FDI with Path Identification.- Changes in Technical Efficiency of FDI.- Changes in Scale and Technical Efficiency with Regional Transplantation Strategy.- Sustainable Efficiency in China with Urbanization.- Concluding Remarks.

Fields of interest

Engineering Economics, Organization, Logistics, Marketing; Landscape, Regional and Urban Planning; Industrial and Production Engineering

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-7719-8

Hardcover

2014. XII, 140 p. 85 illus.

\$129.00

ISBN 978-1-4614-7719-8

usually dispatched within 3 to 5 business days

A.Y. Carmi, Nanyang Technical University, Singapore, Singapore; L.S. Mihaylova, S.J. Godsill, University of Cambridge, Cambridge, United Kingdom (Eds.)

Compressed Sensing & Sparse Filtering

This book is aimed at presenting concepts, methods and algorithms able to cope with undersampled and limited data. One such trend that recently gained popularity and to some extent revolutionised signal processing is compressed sensing. Compressed sensing builds upon the observation that many signals in nature are nearly sparse (or compressible, as they are normally referred to) in some domain, and consequently they can be reconstructed to within high accuracy from far fewer observations than traditionally held to be necessary. Apart from compressed sensing this book contains other related approaches. Each methodology has its own formalities for dealing with such problems. As an [...]

Features

This book is aimed at presenting concepts, methods and algorithms able to cope with undersampled and limited data. One such trend that recently gained popularity and to some extent revolutionised signal processing is compressed sensing. Compressed sensing builds upon the observation that many signals in nature are nearly sparse (or compressible, as they are normally referred to) in some domain, and [...]

Contents

Introduction to Compressed Sensing and Sparse Filtering.- The Geometry of Compressed Sensing.- Sparse Signal Recovery with Exponential-Family Noise.- Nuclear Norm Optimization and its Application to Observation Model Specification.- Nonnegative Tensor Decomposition.- Sub-Nyquist Sampling and Compressed Sensing in Cognitive Radio Networks.- Sparse Nonlinear MIMO Filtering and Identification.- Optimization Viewpoint on Kalman Smoothing with Applications to Robust and Sparse Estimation.- Compressive System Identification.- Distributed Approximation and Tracking using Selective Gossip.- [...]

Fields of interest

Signal, Image and Speech Processing; Numeric Computing; Mathematics of Algorithmic Complexity; Complexity

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-38397-7

Hardcover

2014. XII, 502 p. 135 illus. (Signals and Communication Technology)

\$179.00

ISBN 978-3-642-38397-7

usually dispatched within 3 to 5 business days

A. Mitche, Institut National de la, Montreal, Canada; J.K. Aggarwal, The University of Texas, Austin, USA

Computer Vision Analysis of Image Motion by Variational Methods

This book presents a unified view of image motion analysis under the variational framework. Variational methods, rooted in physics and mechanics, but appearing in many other domains, such as statistics, control, and computer vision, address a problem from an optimization standpoint, i.e., they formulate it as the optimization of an objective function or functional. The methods of image motion analysis described in this book use the calculus of variations to minimize (or maximize) an objective functional which transcribes all of the constraints that characterize the desired motion variables. The book addresses the four core subjects of motion analysis: Motion estimation, detection, [...]

Features

This book presents a unified view of image motion analysis under the variational framework. Variational methods, rooted in physics and mechanics, but appearing in many other domains, such as statistics, control, and computer vision, address a problem from an optimization standpoint, i.e., they formulate it as the optimization of an objective function or functional. The methods of image motion analysis [...]

Contents

Image Motion Processing in Visual Function.- Background Preliminaries.- Optical Flow Estimation.- Motion Detection.- Tracking.- Optical Flow Three-Dimensional Interpretation.

Fields of interest

Signal, Image and Speech Processing; Fluid- and Aerodynamics; Engineering Fluid Dynamics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00710-6

Hardcover

2014. VII, 207 p. 54 illus., 29 illus. in color. (Springer Topics in Signal Processing, Vol. 10)

\$129.00

ISBN 978-3-319-00710-6

usually dispatched within 3 to 5 business days

S. Paul, Intel Labs, Hillsboro, USA; S. Bhunia, Case Western Reserve University, Cleveland, USA

Computing with Memory for Energy-Efficient Robust Systems

This book analyzes energy and reliability as major challenges faced by designers of computing frameworks in the nanometer technology regime. The authors describe the existing solutions to address these challenges and then reveal a new reconfigurable computing platform, which leverages high-density nanoscale memory for both data storage and computation to maximize the energy-efficiency and reliability. The energy and reliability benefits of this new paradigm are illustrated and the design challenges are discussed. Various hardware and software aspects of this exciting computing paradigm are described, particularly with respect to hardware-software co-designed frameworks, where the [...]

Features

This book analyzes energy and reliability as major challenges faced by designers of computing frameworks in the nanometer technology regime. The authors describe the existing solutions to address these challenges and then reveal a new reconfigurable computing platform, which leverages high-density nanoscale memory for both data storage and computation to maximize the energy-efficiency and reliability. The [...]

Contents

Part I Introduction.- Challenges in Computing for Nanoscale Technologies.- A Survey of Computing Architectures.- Motivation for a Memory-Based Computing Hardware.- Part II Memory Based Computing.- Key Features of Memory-Based Computing.- Overview of Hardware and Software Architectures.- Application of Memory-Based Computing.- Part III Hardware Framework.- A Memory Based Generic Reconfigurable Framework.- MAHA Hardware Architecture.- Part IV Software Framework.- Application Analysis.- Application Mapping to MBC Hardware.

Fields of interest

Circuits and Systems; Electronics and Microelectronics, Instrumentation; Processor Architectures

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-7797-6

Hardcover

2014. XIII, 210 p. 73 illus., 41 illus. in color.

\$129.00

ISBN 978-1-4614-7797-6

usually dispatched within 3 to 5 business days

R. Sinha, The University of Auckland, Auckland, New Zealand; P. Roop, The University of Auckland, Auckland, New Zealand; S. Basu, Iowa State University, Ames, USA

Correct-by-Construction Approaches for SoC Design

This book describes an approach for designing Systems-on-Chip such that the system meets precise mathematical requirements. The methodologies presented enable embedded systems designers to reuse intellectual property (IP) blocks from existing designs in an efficient, reliable manner, automatically generating correct SoCs from multiple, possibly mismatching, components.

Features

This book describes an approach for designing Systems-on-Chip such that the system meets precise mathematical requirements. The methodologies presented enable embedded systems designers to reuse intellectual property (IP) blocks from existing designs in an efficient, reliable manner, automatically generating correct SoCs from multiple, possibly mismatching, components. Provides a [...]

Contents

System-on-A-Chip Design.- The AMBA SOC Platform.- Automatic Verification using Model and Module Checking.- Models for SoCs and Specifications.- SoC Design Methodology.- Automatic Protocol Conversion.- Related Work and Outlook.- Appendix: Converter Generation Algorithm.

Fields of interest

Circuits and Systems; Processor Architectures; Electronics and Microelectronics, Instrumentation

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-7863-8

Hardcover

2014. XXI, 144 p. 53 illus., 33 illus. in color.

\$129.00

ISBN 978-1-4614-7863-8

usually dispatched within 3 to 5 business days

C. Charyton

Creative Engineering Design Assessment

Background, Directions, Manual, Scoring Guide and Uses

The Creative Engineering Design Assessment or CEDA is a newly developed tool to assess creativity specific to engineering design which is vital for innovation. The revised CEDA assesses usefulness in addition to originality. Both originality and usefulness are key constructs in creativity but are primarily essential and emphasized ever more in engineering design. Since the preliminary research was presented to the National Science Foundation, further reliability and validity has been developed and established. The CEDA is different from other general creativity measures as it demonstrates discriminant validity with the Creative Personality Scale, Creative Temperament Scale, and the[...]

Features

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Contents

1. An Overview of the Relevance of Creative Engineering Design: Background.- 2. The CEDA Manual and Directions.- Chapter 3 Future Directions: Uses.

Fields of interest

Engineering Design; Industrial and organisational psychology

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4471-5378-8

Softcover

2014. XVII, 73 p. 27 illus. (SpringerBriefs in Applied Sciences and Technology)

\$49.99

ISBN 978-1-4471-5378-8

usually dispatched within 3 to 5 business days

T. Vyhldal, Czech Technical University, Prague, Czech Republic;
J.-F. Lafay, R. Sipahi (Eds.)

Delay Systems

From Theory to Numerics and Applications

This volume is the first of the new series Advances in Dynamics and Delays. It offers the latest advances in the research of analyzing and controlling dynamical systems with delays, which arise in many real-world problems. The contributions in this series are a collection across various disciplines, encompassing engineering, physics, biology, and economics, and some are extensions of those presented at the IFAC (International Federation of Automatic Control) conferences since 2011. The series is categorized in five parts covering the main themes of the contributions: Stability Analysis and Control Design Networks and Graphs Time Delay and Sampled-Data[...]

Features

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Contents

Part I Stability Analysis and Control Design.- Part II Networks and Graphs.- Part III Time-Delay and Sampled-Data Systems.- Part IV Computational and software tools.- Part V Applications.

Fields of interest

Control; Computational Intelligence; Nonlinear Dynamics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01694-8

Hardcover

2014. XXIV, 404 p. 130 illus., 4 illus. in color. (Advances in Delays and Dynamics, Vol. 1)

\$179.00

ISBN 978-3-319-01694-8

usually dispatched within 3 to 5 business days

G. Haobijam, R.P. Palathinkal

Design and Analysis of Spiral Inductors

The book addresses the critical challenges faced by the ever-expanding wireless communication market and the increasing frequency of operation due to continuous innovation of high performance integrated passive devices. The challenges like low quality factor, design complexity, manufacturability, processing cost, etc., are studied with examples and specifics. Silicon on-chip inductor was first reported in 1990 by Nguyen and Meyer in a 0.8 μm silicon bipolar complementary metal oxide semiconductor technology (BiCMOS). Since then, there has been an enormous progress in the research on the performance trends, design and optimization, modeling, quality factor enhancement techniques, etc.,[...]

Features

The book addresses the critical challenges faced by the ever-expanding wireless communication market and the increasing frequency of operation due to continuous innovation of high performance integrated passive devices. The challenges like low quality factor, design complexity, manufacturability, processing cost, etc., are studied with examples and specifics. Silicon on-chip inductor was first reported in [...]

Contents

Introduction.- Optimization of Spiral Inductor with Bounding of Layout Parameters.- Multilayer Pyramidal Symmetric Inductor.- Implementation of the MPS in Voltage Controlled Oscillator.- References.- Index.

Fields of interest

Electronics and Microelectronics, Instrumentation; Microwaves, RF and Optical Engineering; Circuits and Systems

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-81-322-1514-1

Hardcover

2014. XIV, 107 p. 69 illus.

\$129.00

ISBN 978-81-322-1514-1

usually dispatched within 3 to 5 business days

S. Pal, Jadavpur University, Kolkata, India

Design of Artificial Human Joints & Organs

Design of Artificial Human Joints & Organs is intended to present the basics of the normal systems and how, due to aging, diseases or trauma, body parts may need to be replaced with manmade materials. The movement of the body generates forces in various work situations and also internally at various joints, muscles and ligaments. It is essential to figure out the forces, moments, pressure etc to design replacements that manage these stresses without breaking down. The mechanical characterization of the hard and the soft tissues are presented systematically using the principles of solid mechanics. The viscoelastic properties of the tissue will also be discussed. This text covers the [...]

Features

Design of Artificial Human Joints & Organs is intended to present the basics of the normal systems and how, due to aging, diseases or trauma, body parts may need to be replaced with manmade materials. The movement of the body generates forces in various work situations and also internally at various joints, muscles and ligaments. It is essential to figure out the forces, moments, pressure etc to [...]

Contents

Extended ToC is attached to the proposal. CHAPTER 1 : Overview of Human System & its Artificial Replacement CHAPTER 2: Mechanical Properties of Biological materials CHAPTER 3: Basics of Design Process CHAPTER 4: Biomaterials & its Characterisation CHAPTER 5: Dental Implants Its Design & Manufacture CHAPTER 6: Design of Bone Fracture Fixation Device CHAPTER 7: Shoulder Joint and its Artificial Replacement CHAPTER 8: Elbow Joint & its Artificial Replacement CHAPTER 9: Wrist Joint & its Artificial Replacement CHAPTER 10: Finger Joint & its Artificial Replacement [...]

Fields of interest

Biomedical Engineering; Biomaterials; Biological Networks, Systems Biology

Target groups

Professional/practitioner

Type of publication

Monograph

More on www.springer.com/978-1-4614-6254-5

Hardcover

2014. XX, 419 p. 217 illus., 31 illus. in color.

\$179.00

ISBN 978-1-4614-6254-5

usually dispatched within 3 to 5 business days

J.-S. Zhao, Z. Feng, Tsinghua University, Beijing, China (P.R.); N. Ma, Tsinghua University, Beijing, China (P.R.); F. Chu, Tsinghua University, Beijing, China (P.R.)

Design of Special Planar Linkages

Planar linkages play a very important role in mechanical engineering. As the simplest closed chain mechanisms, planar four-bar linkages are widely used in mechanical engineering, civil engineering and aerospace engineering. Design of Special Planar Linkages proposes a uniform design theory for planar four-bar linkages. The merit of the method proposed in this book is that it allows engineers to directly obtain accurate results when there are such solutions for the specified precise positions; otherwise, the best approximate solutions will be found. This book discusses the kinematics and reachable workspace and singularity of a planar 3-RRR linkage, which can be used to analyze other [...]

Features

Planar linkages play a very important role in mechanical engineering. As the simplest closed chain mechanisms, planar four-bar linkages are widely used in mechanical engineering, civil engineering and aerospace engineering. Design of Special Planar Linkages proposes a uniform design theory for planar four-bar linkages. The merit of the method proposed in this book is that it allows engineers [...]

Contents

Design Requirements of Planar Four-Bar Linkages.- Design of Planar Linkages with Specified Positions.- Design of Two Particular Positions for a Foldable Stair.- Kinematic Design of Geared Five-bar Linkage.- Workspace and Singularity of Planar Parallel Linkage.- Statics Analysis of Special Planar Linkages.- Kinetostatics of Double Planar Linkages.- Structural Dynamics of Planar Linkages.- Foldable Tower with Multi-Planar Linkages.- Extended Applications of Double Planar Linkages.

Fields of interest

Engineering Design; Theoretical and Applied Mechanics; Mechatronics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-38447-9

Hardcover

2014. XII, 294 p. 330 illus. (Springer Tracts in Mechanical Engineering)

\$129.00

ISBN 978-3-642-38447-9

usually dispatched within 3 to 5 business days

S. Khandekar, Indian Institute of Technology Kanpur, Kanpur, India; K. Muralidhar, Indian Institute of Technology Kanpur, Kanpur, India

Dropwise Condensation on Inclined Textured Surfaces

Dropwise Condensation on Textured Surfaces presents a holistic framework for understanding dropwise condensation through mathematical modeling and meaningful experiments. The book presents a review of the subject required to build up models as well as to design experiments. Emphasis is placed on the effect of physical and chemical texturing and their effect on the bulk transport phenomena. Application of the model to metal vapor condensation is of special interest. The unique behavior of liquid metals, with their low Prandtl number and high surface tension, is also discussed. The model predicts instantaneous drop size distribution for a given level of substrate subcooling and derives [...]

Features

Dropwise Condensation on Textured Surfaces presents a holistic framework for understanding dropwise condensation through mathematical modeling and meaningful experiments. The book presents a review of the subject required to build up models as well as to design experiments. Emphasis is placed on the effect of physical and chemical texturing and their effect on the bulk transport phenomena. Application of the [...]

Contents

Introduction.- Modeling Dropwise Condensation.- Dropwise Condensation: Simulation Results.- Dropwise Condensation: Experiments.- Concluding remarks and perspectives.

Fields of interest

Engineering Thermodynamics, Heat and Mass Transfer; Surfaces and Interfaces, Thin Films; Engineering Fluid Dynamics

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8446-2

Softcover

2014. XV, 141 p. 81 illus., 25 illus. in color. (Springer-Briefs in Thermal Engineering and Applied Science, Vol. 11)

\$54.99

ISBN 978-1-4614-8446-2

usually dispatched within 3 to 5 business days

R. Gupta, University of Calcutta, Kolkata, India; M. Mitra, University of Calcutta, Kolkata, India; J. Bera, University of Calcutta, Kolkata, India

ECG Acquisition and Automated Remote Processing

The book is focused on the area of remote processing of ECG in the context of telecardiology, an emerging area in the field of Biomedical Engineering Application. Considering the poor infrastructure and inadequate numbers of physicians in rural health-care clinics in India and other developing nations, telemedicine services assume special importance. Telecardiology, a specialized area of telemedicine, is taken up in this book considering the importance of cardiac diseases, which is prevalent in the population under discussion. The main focus of this book is to discuss different aspects of ECG acquisition, its remote transmission and computerized ECG signal analysis for feature[...]

Features

The book is focused on the area of remote processing of ECG in the context of telecardiology, an emerging area in the field of Biomedical Engineering Application. Considering the poor infrastructure and inadequate numbers of physicians in rural health-care clinics in India and other developing nations, telemedicine services assume special importance. Telecardiology, a specialized area of telemedicine, is taken [...]

Contents

Introduction.- ECG Signal Analysis.- ECG acquisition in a Computer.- ECG Transmission.- ECG Compression.- Challenges and Future Trends in Tele-health Services.

Fields of interest

Biomedical Engineering; Signal, Image and Speech Processing; Cardiology

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-81-322-1556-1

Hardcover

2014. XVII, 131 p. 65 illus.

\$129.00

ISBN 978-81-322-1556-1

usually dispatched within 3 to 5 business days

V. Sridhar, PES College of Engineering, Mandya, India; H.S. Sheshadri, PES College of Engineering, Mandya, India; M.C. Padma, PES College of Engineering, Mandya, India (Eds.)

Emerging Research in Electronics, Computer Science and Technology

Proceedings of International Conference, ICERECT 2012

PES College of Engineering is organizing an International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT-12) in Mandya and merging the event with Golden Jubilee of the Institute. The Proceedings of the Conference presents high quality, peer reviewed articles from the field of Electronics, Computer Science and Technology. The book is a compilation of research papers from the cutting-edge technologies and it is targeted towards the scientific community actively involved in research activities.

Features

PES College of Engineering is organizing an International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT-12) in Mandya and merging the event with Golden Jubilee of the Institute. The Proceedings of the Conference presents high quality, peer reviewed articles from the field of Electronics, Computer Science and Technology. The book is a compilation of research papers [...]

Contents

Retinal Vessel Segmentation Using Local Entropy Thresholding.- Implementation of Minutiae Extraction and False Minutiae Elimination for Fingerprint Image on FPGA.- Resistive Fractal FSS Based Broad Band Radar Absorber for Aircraft Stealth Applications.- FPGA AND ASIC Implementation of 16-bit Vedic Multiplier Using Urdhva Triyakbhyam Sutra.- Multi-Algorithm Decision Level Fusion Using Finger Knuckle Print Biometric.- Encryption of Compressed Video Using Efficient RSA-CRT Algorithm.- Design of High Speed Reconfigurable Coprocessor for Next Generation Communication Platform.- Secret Code[...]

Fields of interest

Electrical Engineering; Communications Engineering, Networks; Signal, Image and Speech Processing; Biomedical Engineering; Control

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-81-322-1156-3

Hardcover

2014. XXIII, 947 p. 560 illus. (Lecture Notes in Electrical Engineering, Vol. 248)

\$229.00

ISBN 978-81-322-1156-3

usually dispatched within 3 to 5 business days

M.F. Zaeh (Ed.)

Enabling Manufacturing Competitiveness and Economic Sustainability

Proceedings of the 5th International Conference on Changeable, Agile, Reconfigurable and Virtual Production (CARV 2013), Munich, Germany, October 6th-9th, 2013

The changing manufacturing environment requires more responsive and adaptable manufacturing systems. The theme of the 5th International Conference on Changeable, Agile, Reconfigurable and Virtual production (CARV2013) is 'Enabling Manufacturing Competitiveness and Economic Sustainability. Leading edge research and best implementation practices and experiences, which address these important issues and challenges, are presented. The proceedings include advances in manufacturing systems design, planning, evaluation, control and evolving paradigms such as mass customization, personalization, changeability, re-configurability and flexibility. New and important concepts such as the dynamic[...]

Features

The changing manufacturing environment requires more responsive and adaptable manufacturing systems. The theme of the 5th International Conference on Changeable, Agile, Reconfigurable and Virtual production (CARV2013) is 'Enabling Manufacturing Competitiveness and Economic Sustainability. Leading edge research and best implementation practices and experiences, which address these important issues and [...]

Contents

Vision & Future Perspectives.- Manufacturing Systems.- Product & Production Co-Development.- Enablers of Change & Manufacturing Success.- Global Competitiveness & Sustainability.- Enterprise & Knowledge Management.- Application & Trends.

Fields of interest

Manufacturing, Machines, Tools; Control; Production / Logistics; Quality Control, Reliability, Safety and Risk

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-02053-2

Hardcover

2014. XII, 480 p. 464 illus., 266 illus. in color.

\$399.00

ISBN 978-3-319-02053-2

usually dispatched within 3 to 5 business days

Q.J. Wang, Northwestern University, Evanston, USA; Y.-W. Chung, Northwestern University, Evanston, USA (Eds.)

Encyclopedia of Tribology

TRIBOLOGY – the study of friction, wear and lubrication – impacts almost every aspect of our daily lives. The Springer Encyclopedia of Tribology is an authoritative and comprehensive reference covering all major aspects of the science and engineering of tribology that are relevant to researchers across all engineering industries and related scientific disciplines. This is the first major reference that brings together the science, engineering and technological aspects of tribology of this breadth and scope in a single work. Developed and written by leading experts in the field, the Springer Encyclopedia of Tribology covers the fundamentals as well as advanced applications across[...]

Features

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Contents

Automotive and Aerospace Tribology.- Bearing Design Procedures.- Bio-Related Tribology.- Boundary Lubrication.- Contact Mechanics, Isothermal.- Contact Mechanics, Thermal.- Corrosion.- Contact Fatigue.- Conformal-Contact Interface Mechanics.- Economic aspects.- Electrical Contact.- Failure of Tribological Components and Systems and Condition-Based Monitoring.- Friction Science.- Gas Lubrication and Vapor-Phase Lubrication.- Health, Safety and Environmental Issues.- Heat Transfer.- Lubricants.- Lubrication Fundamentals.- Magnetic Storage Tribology.- Manufacturing Tribology.- Materials[...]

Fields of interest

Mechanical Engineering; Tribology, Corrosion and Coatings; Classical Continuum Physics; Automotive Engineering; Biomedical Engineering; Surfaces and Interfaces, Thin Films

Target groups

Research

Type of publication

Encyclop(a)edia

More on www.springer.com/978-0-387-92896-8

Hardcover

2013. LI, 4139 p. 3617 illus., 1561 illus. in color. Print + eReference.

\$3,400.00

ISBN 978-0-387-92898-2

Due: July 19, 2013

J. Mathew, University of Bristol, Bristol, United Kingdom; R.A. Shafik, D.K. Pradhan, University of Bristol, Bristol, United Kingdom (Eds.)

Energy-Efficient Fault-Tolerant Systems

This book describes the state-of-the-art in energy efficient, fault-tolerant embedded systems. It covers the entire product lifecycle of electronic systems design, analysis and testing and includes discussion of both circuit and system-level approaches. Readers will be enabled to meet the conflicting design objectives of energy efficiency and fault-tolerance for reliability, given the up-to-date techniques presented.

Features

This book describes the state-of-the-art in energy efficient, fault-tolerant embedded systems. It covers the entire product lifecycle of electronic systems design, analysis and testing and includes discussion of both circuit and system-level approaches. Readers will be enabled to meet the conflicting design objectives of energy efficiency and fault-tolerance for reliability, given the up-to-date [...]

Contents

Evolution of Fault Tolerant Design.- Fault and Reliability Models.- Energy Efficient Design Techniques.- Error Correction Coding.- System-level Reliable Design.- Fault Tolerant.- Finite Field Arithmetic Circuit Design and Testing Techniques.- Reliable Network-on-Chip Architectures.- Energy Efficient Reconfigurable Systems.- Bio-Inspired Online Fault Detection in NoC Interconnect.- Fault-tolerant dynamically reconfigurable NoC-based SoC.

Fields of interest

Circuits and Systems; Semiconductors; Renewable and Green Energy; Applied and Technical Physics; Microwaves, RF and Optical Engineering; Applied Optics, Optoelectronics, Optical Devices

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-4192-2

Hardcover

2014. XIV, 335 p. 132 illus., 51 illus. in color.

\$179.00

ISBN 978-1-4614-4192-2

usually dispatched within 3 to 5 business days

D. Gutierrez-Lemini

Engineering Viscoelasticity

Engineering Viscoelasticity covers all aspects of the thermo- mechanical response of viscoelastic substances that a practitioner in the field of viscoelasticity would need to design experiments, interpret test data, develop stress-strain models, perform stress analyses, design structural components, and carry out research work. The material in each chapter is developed from the elementary to the esoteric, providing the background in mathematics and mechanics that are central to understanding the subject matter being presented. This book also examines how viscoelastic materials respond to the application of loads, and provides practical guidelines to use them in the design of[...]

Features

Engineering Viscoelasticity covers all aspects of the thermo- mechanical response of viscoelastic substances that a practitioner in the field of viscoelasticity would need to design experiments, interpret test data, develop stress-strain models, perform stress analyses, design structural components, and carry out research work. The material in each chapter is developed from the elementary to the [...]

Contents

Fundamental Aspect of Viscoelastic Response.- Constitutive Equations in Hereditary Integral Form.- Constitutive Equations in Differential Operator Form.- Constitutive Equations for Steady-State Oscillations.- Structural Mechanics.- Temperature Effects.- Material Property Functions and Their Characterization.- Three Dimensional Constitutive Equations.- Isothermal Boundary-Value Problems.- Wave Propagation.- Variational Principles and Energy Theorems.- Appendix A-Mathematical Background.- Appendix B-Elements of Solid Mechanics.

Fields of interest

Theoretical and Applied Mechanics; Structural Mechanics; Structural Materials; Engineering Fluid Dynamics

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-1-4614-8138-6

Hardcover

2014. XV, 353 p. 130 illus.

\$99.00

ISBN 978-1-4614-8138-6

usually dispatched within 3 to 5 business days

G.P. Tandon, University of Dayton Research Institute, Dayton, USA; S.A. Tekalur, Michigan State University, East Lansing, USA; C. Ralph, Southern Research Institute, Birmingham, USA; N.R. Sottos, University of Illinois, Urbana, USA; B. Blaiszik, Argonne National Laboratory, Argonne, USA (Eds.)

Experimental Mechanics of Composite, Hybrid, and Multifunctional Materials, Volume 6

Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics

Experimental Mechanics of Composite, Hybrid, and Multifunctional Materials: Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics, the sixth volume of eight from the Conference, brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on a wide range of areas, including: Characterization of Energy Storage Materials Microvascular & Natural Composites Nanocomposites for Multifunctional Performance Composite/Hybrid Characterization Using Digital Image Correlation Failure Behavior of Polymer Matrix Composites Non-Destructive Testing of Composites Composite Test Methods Joints/Bonded Composites

Features

This critical collection examines a range of materials from joints and bonded composites to energy storage materials, as presented in early findings and case studies from the Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics. The collection includes papers in the following general technical research areas: • Characterization of Energy Storage Materials • [...]

Contents

From the Contents: Prediction of Properties of Coir Fiber Reinforced Composite by ANN.- Impact of Semi-rigidity of Joint on Timber Composite Truss Beam.- Prediction of Properties of CRPCSC Particulate Composite by ANN.- Lithium-Ion Battery Electrode Inspection Using Flash Thermography.- In-Situ Characterization of Strain in Lithium Ion Battery Anodes.- Fracture Toughness and Fatigue Behavior of Nanoreinforced Carbon/Epoxy Composites.- Design of Multifunctional Energetic Structural Composites: A Preliminary Study on an Epoxy-Rubber Matrix With Exothermic Mixture Reinforcements.- [...]

Fields of interest

Continuum Mechanics and Mechanics of Materials; Characterization and Evaluation of Materials; Theoretical and Applied Mechanics

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-00872-1

Hardcover

2014. VIII, 257 p. 259 illus., 188 illus. in color. (Conference Proceedings of the Society for Experimental Mechanics Series)

\$259.00

ISBN 978-3-319-00872-1

usually dispatched within 3 to 5 business days

O. Khatib, V. Kumar, G. Sukhatme (Eds.)

Experimental Robotics

The 12th International Symposium on Experimental Robotics

The International Symposium on Experimental Robotics (ISER) is a series of bi-annual meetings which are organized in a rotating fashion around North America, Europe and Asia/Oceania. The goal of ISER is to provide a forum for research in robotics that focuses on novelty of theoretical contributions validated by experimental results. The meetings are conceived to bring together, in a small group setting, researchers from around the world who are in the forefront of experimental robotics research. This unique reference presents the latest advances across the various fields of robotics, with ideas that are not only conceived conceptually but also explored experimentally. It collects [...]

Features

The International Symposium on Experimental Robotics (ISER) is a series of bi-annual meetings which are organized in a rotating fashion around North America, Europe and Asia/Oceania. The goal of ISER is to provide a forum for research in robotics that focuses on novelty of theoretical contributions validated by experimental results. The meetings are conceived to bring together, in a small group setting, [...]

Contents

Human-robot Interaction.- Medical and Assistive Robotics.- Calibration.- Grasping and Manipulation.- Motor Control and Locomotion.- Robot Modeling, Object Modeling and Mapping.- Mapping and Tracking.- Multirobot Systems, Novel Sensors and Actuators.- Posters.

Fields of interest

Robotics and Automation; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-28571-4

Hardcover

2014. XXIV, 937 p. 494 illus., 413 illus. in color. (Springer Tracts in Advanced Robotics, Vol. 79)

\$149.00

ISBN 978-3-642-28571-4

usually dispatched within 3 to 5 business days

O. Pivert, Université de Rennes 1, Lannion Cedex, France; S. Zdrożny, Polish Academy of Sciences, Warsaw, Poland (Eds.)

Flexible Approaches in Data, Information and Knowledge Management

This volume showcases contributions from internationally-known researchers in the field of information management. Most of the approaches presented here make use of fuzzy logic, introduced by L.A. Zadeh almost 50 years ago, which constitute a powerful tool to model and handle gradual concepts. What all of these contributions have in common is placing the user at the center of the information system, be it for helping him/her to query a data set, to handle imperfect information, or to discover useful knowledge from a massive collection of data. Researchers working in data and knowledge management will greatly benefit from this collection of up-to-date studies. This may be also an [...]

Features

This volume showcases contributions from internationally-known researchers in the field of information management. Most of the approaches presented here make use of fuzzy logic, introduced by L.A. Zadeh almost 50 years ago, which constitute a powerful tool to model and handle gradual concepts. What all of these contributions have in common is placing the user at the center of the information system, be it [...] [...]

Contents

Part I Bipolar preference queries.- Part II Ontology-based data access.- Part III Uncertain databases.- Part IV Flexible queries over nonstandard data.- Part V Fuzzy knowledge discovery and exploitation.

Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00953-7

Hardcover

2014. XII, 320 p. 56 illus. (Studies in Computational Intelligence, Vol. 497)

\$129.00

ISBN 978-3-319-00953-7

usually dispatched within 3 to 5 business days

T. Alam, P.S. Lee, L.-W. Jin

Flow Boiling in Microgap Channels

Experiment, Visualization and Analysis

Flow Boiling in Microgap Channels: Experiment, Visualization and Analysis presents an up-to-date summary of the details of the confined to unconfined flow boiling transition criteria, flow boiling heat transfer and pressure drop characteristics, instability characteristics, two phase flow pattern and flow regime map and the parametric study of microgap dimension. Advantages of flow boiling in microgaps over microchannels are also highlighted. The objective of this Brief is to obtain a better fundamental understanding of the flow boiling processes, compare the performance between microgap and conventional microchannel heat sinks, and evaluate the microgap heat sink for instabilities[...]

Features

Flow Boiling in Microgap Channels: Experiment, Visualization and Analysis presents an up-to-date summary of the details of the confined to unconfined flow boiling transition criteria, flow boiling heat transfer and pressure drop characteristics, instability characteristics, two phase flow pattern and flow regime map and the parametric study of microgap dimension. Advantages of flow boiling in microgaps over [...]

Contents

Introduction.- Design and Operating Parameters.- Characteristics of Two-Phase Flow Boiling in Microgap Channel.- Comparison of Flow Boiling Characteristics between Microgap and Microchannel.- Optimization of Microgap Channel Dimension and Operating Condition.- Surface Roughness Effect on Microgap Channel.- Two-Phase Microgap Channel in Mitigating Flow Instabilities and Flow Reversal.- Two-Phase Microgap Channel Cooling Technology for Hotspots Mitigation.- Conclusions and Recommendations.- Appendix A: Uncertainty Analysis for Experimental Data.- Appendix B: Nomenclature.- Appendix C:[...]

Fields of interest

Engineering Thermodynamics, Heat and Mass Transfer; Energy Technology; Energy Systems

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-7189-9

Softcover

2014. XI, 84 p. 66 illus., 49 illus. in color. (SpringerBriefs in Thermal Engineering and Applied Science, Vol. 10) **\$54.99**

ISBN 978-1-4614-7189-9

usually dispatched within 3 to 5 business days

J. Carroll, Sandia National Laboratories, Albuquerque, USA (Ed.)

Fracture and Fatigue, Volume 7

Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics

Fracture and Fatigue, Volume 7: Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics, the seventh volume of eight from the Conference, brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on a wide range of areas, including: Microstructural Effects in Fatigue & FractureFracture of InterfacesFracture of Composites and Interface CracksFatigue & Fracture: Environmental & Loading EffectsFracture & Digital Image Correlation

Features

This critical collection examines a range of topics in fracture and fatigue, including environmental and loading effects in fracture and fatigue and DIC and fracture, as presented in early findings and case studies from the Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics. The collection includes papers in the following general technical research areas:• Microstructural [...]

Contents

From the Contents: Effect of Dynamic Film Debonding on Self-Assembled Monolayers.- Experimental Tools for Responsive Hydrogel Characterization.- Fusion of Global and Local Measurements of Damage in Bonded Joints.- DOE Testing of Diffusion Bonded Nickel Joints.- Integrated Global Digital Image Correlation for Interface Delamination Characterization.- Lamb Wave Based Monitoring of Delamination Growth in Mode I and Mode II Fracture Tests.- Investigation of Crack Growth Along Curved Interfaces in L-shaped Composite and Polymers.- Effect of Cold Spray Deposition of Similar Material on[...]

Fields of interest

Continuum Mechanics and Mechanics of Materials

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-00764-9

Hardcover

2014. VII, 96 p. 85 illus., 63 illus. in color. (Conference Proceedings of the Society for Experimental Mechanics Series)

\$199.00

ISBN 978-3-319-00764-9

usually dispatched within 3 to 5 business days

J.J.(H. Park, Seoul University of Science & Seoul, Korea, Republic of (South Korea); I. Stojmenovic, University of Ottawa, Ottawa, Canada; M. Choi, F. Xhafa, Polytechnic University of Catalonia, Barcelona, Spain (Eds.)

Future Information Technology

FutureTech 2013

Future technology information technology stands for all of continuously evolving and converging information technologies, including digital convergence, multimedia convergence, intelligent applications, embedded systems, mobile and wireless communications, bio-inspired computing, grid and cloud computing, semantic web, user experience and HCI, security and trust computing and so on, for satisfying our ever-changing needs. In past twenty five years or so, Information Technology (IT) influenced and changed every aspect of our lives and our cultures. These proceedings foster the dissemination of state-of-the-art research in all future IT areas, including their models, services, and novel[...]

Features

Future technology information technology stands for all of continuously evolving and converging information technologies, including digital convergence, multimedia convergence, intelligent applications, embedded systems, mobile and wireless communications, bio-inspired computing, grid and cloud computing, semantic web, user experience and HCI, security and trust computing and so on, for satisfying our [...]

Contents

Dedicated Smart Software System for Mobile X-ray; Chang Won Jeong, et al.- Real-time Intuitive Terrain Modeling by Mapping Video Images onto a Texture Database; Wei Song, et al.- The RIP for Random Matrices with Complex Gaussian Entries; Kuo Xu, et al.- Evolving Mobile App Recommender Systems: An Incremental Multi-objective Approach; Xiao Xia, et al.- Projects Proposals Ranking; Sylvia Encheva.- A Stereo Micro Image Fusion Algorithm Based on Expectation-Maximization Technique; Cuixia Bai, et al.- Moldable Job Scheduling for HPC as a Service; Kuo-Chan Huang, et al.- MapReduce Example[...]

Fields of interest

Communications Engineering, Networks; Information Systems and Communication Service; Multimedia Information Systems

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40860-1

Hardcover

2014. XXIII, 479 p. 190 illus. (Lecture Notes in Electrical Engineering, Vol. 276)

\$259.00

ISBN 978-3-642-40860-1

usually dispatched within 3 to 5 business days

J. Kauffman, The University of Tokyo, Fox-Amphoux, France; K.M. LEE, Ajou University, Suwon, Korea, Republic of (South Korea) (Eds.)

Handbook of Sustainable Engineering

"The efficient utilization of energy, sustainable use of natural resources, and large-scale adoption of sustainable technologies is the key to a sustainable future. The Handbook of Sustainable Engineering provides tools that will help us achieve these goals". Nobel Prize Winner Dr. R.K. Pauchauri, Chairman, UN Intergovernmental Panel on Climate Change As global society confronts the challenges of diminishing resources, ecological degradation, and climate change, engineers play a crucial role designing and building technologies and products that fulfill our needs for utility and sustainability. The Handbook of Sustainable Engineering equips readers with the context and the best[...]

Features

"The efficient utilization of energy, sustainable use of natural resources, and large-scale adoption of sustainable technologies is the key to a sustainable future. The Handbook of Sustainable Engineering provides tools that will help us achieve these goals". Nobel Prize Winner Dr. R.K. Pauchauri, Chairman, UN Intergovernmental Panel on Climate [...]

Fields of interest

Renewable and Green Energy; Renewable and Green Energy; Sustainable Development

Target groups

Professional/practitioner

Type of publication

Handbook

More on www.springer.com/978-1-4020-8938-1

2013. XXX, 1298 p. 427 illus., 325 illus. in color. eReference.

\$679.00

ISBN 978-1-4020-8939-8

Online orders shipping within 2-3 days.

T. Oh, R. Harjani

High Performance Multi-Channel High-Speed I/O Circuits

This book describes design techniques that can be used to mitigate crosstalk in high-speed I/O circuits. The focus of the book is in developing compact and low power integrated circuits for crosstalk cancellation, inter-symbol interference (ISI) mitigation and improved bit error rates (BER) at higher speeds. This book is one of the first to discuss in detail the problem of crosstalk and ISI mitigation encountered as data rates have continued beyond 10Gb/s. Readers will learn to avoid the data performance cliff, with circuits and design techniques described for novel, low power crosstalk cancellation methods that are easily combined with current ISI mitigation architectures.

Features

This book describes design techniques that can be used to mitigate crosstalk in high-speed I/O circuits. The focus of the book is in developing compact and low power integrated circuits for crosstalk cancellation, inter-symbol interference (ISI) mitigation and improved bit error rates (BER) at higher speeds.

This book is one of the first to discuss in detail the problem of crosstalk and ISI mitigation [...]

Contents

Introduction.- 2x6 Gb/s MIMO Crosstalk Cancellation and Signal Reutilization Scheme in 130 nm CMOS Process.- 4x12 Gb/s MIMO Crosstalk Cancellation and Signal Reutilization Receiver in 65 nm CMOS Process.- Adaptive XTCCR, AGC, and Adaptive DFE Loop.- Research Summary & Contributions.- References.- Appendix A: Noise Analysis.- Appendix B: Issues of Applying Consecutive 2x2 XTCCR on Multi-Lane I/Os (≥ 4).- Appendix C: Transmitter-Side Discrete-Time FIR XTC Filter versus Receiver-Side Analog-IIR XTC Filter.- Appendix D: Line Mismatch Sensitivity.- Appendix E: Input Matching for 4x4 XTCCR [...]

Fields of interest

Circuits and Systems; Electronics and Microelectronics, Instrumentation; Microwaves, RF and Optical Engineering

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-4962-1

Hardcover

2014. X, 89 p. 64 illus., 44 illus. in color. (Analog Circuits and Signal Processing)

\$129.00

ISBN 978-1-4614-4962-1

usually dispatched within 3 to 5 business days

M. Wozniak, Wroclaw University of Technology, Wroclaw, Poland

Hybrid Classifiers

Methods of Data, Knowledge, and Classifier Combination

This book delivers a definite and compact knowledge on how hybridization can help improving the quality of computer classification systems. In order to make readers clearly realize the knowledge of hybridization, this book primarily focuses on introducing the different levels of hybridization and illuminating what problems we will face with as dealing with such projects. In the first instance the data and knowledge incorporated in hybridization were the action points, and then a still growing up area of classifier systems known as combined classifiers was considered. This book comprises the aforementioned state-of-the-art topics and the latest research results of the author and his[...]

Features

This book delivers a definite and compact knowledge on how hybridization can help improving the quality of computer classification systems. In order to make readers clearly realize the knowledge of hybridization, this book primarily focuses on introducing the different levels of hybridization and illuminating what problems we will face with as dealing with such projects. In the first instance the data and [...]

Contents

Introduction.- Data and knowledge hybridization.- Classifier hybridization.- Chosen applications of hybrid classifiers.- Conclusions.

Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-40996-7

Hardcover

2014. XVI, 217 p. 69 illus., 3 illus. in color. (Studies in Computational Intelligence, Vol. 519)

\$129.00

ISBN 978-3-642-40996-7

usually dispatched within 3 to 5 business days

H.K. Kim, Catholic University of DaeGu, DaeGu, Korea, Republic of (South Korea); S.-I. Ao, International Association of Engineers, Hong Kong, Hong Kong; M.A. Amouzegar, California State Polytechnic University, Pomona, USA; B.B. Rieger, Universität Trier, Trier, Germany (Eds.)

IAENG Transactions on Engineering Technologies

Special Issue of the World Congress on Engineering and Computer Science 2012

IAENG Transactions on Engineering Technologies contains forty-nine revised and extended research articles, written by prominent researchers participating in the conference. Topics covered include circuits, engineering mathematics, control theory, communications systems, systems engineering, manufacture engineering, computational biology, chemical engineering, and industrial applications. This book offers the state of art of tremendous advances in engineering technologies and physical science and applications, and also serves as an excellent source of reference for researchers and graduate students working with/on engineering technologies and physical science and applications.

Features

IAENG Transactions on Engineering Technologies contains forty-nine revised and extended research articles, written by prominent researchers participating in the conference. Topics covered include circuits, engineering mathematics, control theory, communications systems, systems engineering, manufacture engineering, computational biology, chemical engineering, and industrial applications. This book [...]

Contents

1 A 480 MHz Band#Pass Sigma Delta Analog to Digital Modulator with Active Inductor based Resonators.- 2 Basic Computations using a Novel Scalable Pulse-Mode Modules.- 3 Hardware Implementation Of Microprogrammed Controller Based Digital Fir Filter.- 4 Drude-Lorentz Model Of Semiconductor Optical Plasmons.- 5 Optimal Power Conversion of Standalone Wind Energy Conversion Systems Using Fuzzy Adaptive Control.- 6 Design of Augmented Observer for Rotor Systems.- 7 Cooperative Tasks Using Teams of Mobile Robots.- 8 An Optimized, Authenticated Key Distribution Protocol For Optical Channels.- 9[...]

Fields of interest

Control , Robotics, Mechatronics; Software Engineering / Programming and Operating Systems; Appl. Mathematics / Computational Methods of Engineering; Electronic Circuits and Devices

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-6817-8

Hardcover

2014. XI, 718 p. 137 illus. (Lecture Notes in Electrical Engineering, Vol. 247)

\$229.00

ISBN 978-94-007-6817-8

usually dispatched within 3 to 5 business days

M. Fumagalli, University of Twente, Enschede, Netherlands

Increasing Perceptual Skills of Robots Through Proximal Force/Torque Sensors

A Study for the Implementation of Active Compliance on the iCub Humanoid Robot

This thesis proposes an effective methodology for enhancing the perceptual capabilities and achieving interaction control of the iCub humanoid robot. The method is based on the integration of measurements from different sensors (force/torque, inertial and tactile sensors) distributed along the robot's kinematic chain. Humanoid robots require a substantial amount of sensor information to create their own representations of the surrounding environment. Tactile perception is of primary importance for the exploration process. Also in humans, the tactile system is completely functional at birth. In humanoid robotics, the measurements of forces and torques that the robot exchanges with its[...]

Features

This thesis proposes an effective methodology for enhancing the perceptual capabilities and achieving interaction control of the iCub humanoid robot. The method is based on the integration of measurements from different sensors (force/torque, inertial and tactile sensors) distributed along the robot's kinematic chain. Humanoid robots require a substantial amount of sensor information to create their own [...]

Contents

Part I Increasing Perceptual Skills of Robots Through Proximal FTSS.- Improving the Estimate of Proprioceptive Measurements.

Fields of interest

Control; Artificial Intelligence (incl. Robotics); Robotics and Automation

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01121-9

Hardcover

2014. XIX, 105 p. 54 illus., 15 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-01121-9

usually dispatched within 3 to 5 business days

G.B. Halt, Jr., Volpe and Koenig, P.C., Philadelphia, USA; J.C. Donch, Volpe and Koenig, P.C., Philadelphia, USA; A.R. Stiles, Volpe and Koenig, P.C., Philadelphia, USA; F. Robert, Fesnak & Associates LLP, Blue Bell, USA

Intellectual Property in Consumer Electronics, Software and Technology Startups

This book provides a comprehensive guide to procuring, utilizing and monetizing intellectual property rights, tailored for readers in the high-tech consumer electronics and software industries, as well as technology startups. Numerous, real examples, case studies and scenarios are incorporated throughout the book to illustrate the topics discussed. Readers will learn what to consider throughout the various creative phases of a product's lifespan from initial research and development initiatives through post-production. Readers will gain an understanding of the intellectual property protections afforded to U.S. corporations, methods to pro-actively reduce potential problems, and[...]

Features

This book provides a comprehensive guide to procuring, utilizing and monetizing intellectual property rights, tailored for readers in the high-tech consumer electronics and software industries, as well as technology startups. Numerous, real examples, case studies and scenarios are incorporated throughout the book to illustrate the topics discussed. Readers will learn what to consider throughout the [...]

Contents

Part I Overview of Intellectual Property Rights.- Patents.- Trade Secret Protection.- Trademarks and Trade Dress.- Copyrights.- Domain Names.- Intellectual Property Issues in Labeling and Marketing.- Part II Implementing Intellectual Property Practices, Procedures and Strategies.- Seven Basic Steps to Getting Started.- Deciding Between Patent or Trade Secret Protection.- Intellectual Property Strategies for Software: Patent and Copyright Protection.- Developing and Managing an Intellectual Property Portfolio.- Part III Monetization of Intellectual Property Portfolios.- Intellectual[...]

Fields of interest

Circuits and Systems; Engineering Economics, Organization, Logistics, Marketing; Legal Aspects of Computing; International IT and Media Law, Intellectual Property Law

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-1-4614-7911-6

Hardcover

2014. XXII, 241 p. 14 illus.

\$119.00

ISBN 978-1-4614-7911-6

usually dispatched within 3 to 5 business days

J. He, University of Southern California, Los Angeles, USA; C.-S. Kim, Korea University, Seoul, Korea, Republic of (South Korea); C.-C.J. Kuo

Interactive Segmentation Techniques

Algorithms and Performance Evaluation

This book focuses on interactive segmentation techniques, which have been extensively studied in recent decades. Interactive segmentation emphasizes clear extraction of objects of interest, whose locations are roughly indicated by human interactions based on high level perception. This book will first introduce classic graph-cut segmentation algorithms and then discuss state-of-the-art techniques, including graph matching methods, region merging and label propagation, clustering methods, and segmentation methods based on edge detection. A comparative analysis of these methods will be provided with quantitative and qualitative performance evaluation, which will be illustrated using[...]

Features

This book focuses on interactive segmentation techniques, which have been extensively studied in recent decades. Interactive segmentation emphasizes clear extraction of objects of interest, whose locations are roughly indicated by human interactions based on high level perception. This book will first introduce classic graph-cut segmentation algorithms and then discuss state-of-the-art techniques, including [...]

Contents

Introduction.- Overview and classification of interactive segmentation methods.- Interactive segmentation algorithms.- Performance evaluation.- Conclusion and future work.

Fields of interest

Signal, Image and Speech Processing; Image Processing and Computer Vision; User Interfaces and Human Computer Interaction

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-981-4451-59-8

Softcover

2014. X, 76 p. 40 illus., 37 illus. in color. (SpringerBriefs in Signal Processing)

\$54.99

ISBN 978-981-4451-59-8

usually dispatched within 3 to 5 business days

M. Jiménez, R. Palomera, University of Puerto Rico at Mayagüez, Mayagüez, Puerto Rico; I. Couvartier, University of Puerto Rico at Mayagüez, Mayagüez, Puerto Rico

Introduction to Embedded Systems

Using Microcontrollers and the MSP430

This textbook serves as an introduction to the subject of embedded systems design, using microcontrollers as core components. It develops concepts from the ground up, covering the development of embedded systems technology, architectural and organizational aspects of controllers and systems, processor models, and peripheral devices. Since microprocessor-based embedded systems tightly blend hardware and software components in a single application, the book also introduces the subjects of data representation formats, data operations, and programming styles. The practical component of the book is tailored around the architecture of a widely used Texas Instrument's microcontroller, the[...]

Features

This textbook serves as an introduction to the subject of embedded systems design, using microcontrollers as core components. It develops concepts from the ground up, covering the development of embedded systems technology, architectural and organizational aspects of controllers and systems, processor models, and peripheral devices. Since microprocessor-based embedded systems tightly blend hardware and [...]

Contents

Introduction.- Number Systems and Data Formats.- Microcomputer Organization.- Assembly Language Programming.- Embedded Programming Using C.- Fundamentals of Interfacing.- Embedded Peripherals.- External World Interfaces.- Principles of Serial Communication.- The Analog Signal Chain.-

Fields of interest

Circuits and Systems; Processor Architectures; Electronics and Microelectronics, Instrumentation

Target groups

Upper undergraduate

Type of publication

Undergraduate textbook

More on www.springer.com/978-1-4614-3142-8

Hardcover

2014. XXIII, 648 p. 348 illus., 102 illus. in color. With online files/update.

\$119.00

ISBN 978-1-4614-3142-8

usually dispatched within 3 to 5 business days

J.-B. Li, S.-C. Chu, J.-S. Pan, National Kaohsiung University of Applied, Sanmin District, Taiwan

Kernel Learning Algorithms for Face Recognition

Kernel Learning Algorithms for Face Recognition covers the framework of kernel based face recognition. This book discusses the advanced kernel learning algorithms and its application on face recognition. This book also focuses on the theoretical deviation, the system framework and experiments involving kernel based face recognition. Included within are algorithms of kernel based face recognition, and also the feasibility of the kernel based face recognition method. This book provides researchers in pattern recognition and machine learning area with advanced face recognition methods and its newest applications.

Features

This book discusses the advanced kernel learning algorithms and its application on face recognition. The book focuses on the theoretical deviation, the system framework and experiments involving kernel based face recognition. This authors aim to solve the parameter selection problems endured by kernel learning algorithms, and presents kernel optimization method with the data dependent kernel. This text [...]

Contents

Introduction.- Statistical Learning and Face Recognition.- Kernel Learning Foundation.- Kernel Principal Analysis Based Face Recognition.- Kernel Discriminant Analysis Based Face Recognition.- Kernel Manifold Learning Based Face Recognition.- Kernel Semi-supervised Based Face Recognition.- Kernel Learning Based Face Recognition for Smart Environment.- Kernel Optimization Based Face Recognition.- Kernel Construction for Face Recognition.

Fields of interest

Signal, Image and Speech Processing; Communications Engineering, Networks; Computational Intelligence; Image Processing and Computer Vision

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-0160-5

Hardcover

2014. XV, 225 p. 58 illus., 19 illus. in color.

\$129.00

ISBN 978-1-4614-0160-5

usually dispatched within 3 to 5 business days

H. Solar Ruiz, Centre of Technical Research (CEIT), San Sebastian, Spain; R. Berenguer Pérez, Centre of Technical Research (CEIT), San Sebastian, Spain

Linear CMOS RF Power Amplifiers

A Complete Design Workflow

The work establishes the design flow for the optimization of linear CMOS power amplifiers from the first steps of the design to the final IC implementation and tests. The authors also focuses on design guidelines of the inductor's geometrical characteristics for power applications and covers their measurement and characterization. Additionally, a model is proposed which would facilitate designs in terms of transistor sizing, required inductor quality factors or minimum supply voltage. The model considers limitations that CMOS processes can impose on implementation. The book also provides different techniques and architectures that allow for optimization.

Features

This work describes the design flow for the optimization of linear CMOS power amplifiers from the first steps of the design to the final IC implementation and tests. The authors also focus on design guidelines for the inductor's geometrical characteristics for power applications and cover their measurement and characterization. Additionally, a model is proposed which facilitates design in terms of [...]

Contents

Introduction.- Power Amplifier Fundamentals: Metrics.- Power Amplifier Fundamentals: Classes.- CMOS Performance Issues.- Enhancement Techniques for CMOS Linear PAs.- Power Amplifier Design.- Test Setups and Results.- Conclusion.- Index.

Fields of interest

Circuits and Systems; Electronics and Microelectronics, Instrumentation; Power Electronics, Electrical Machines and Networks; Energy Systems

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-8656-5

Hardcover

2014. XIV, 185 p. 153 illus., 35 illus. in color.

\$129.00

ISBN 978-1-4614-8656-5

usually dispatched within 3 to 5 business days

S. Brahnam, Missouri State University, Springfield, USA; L.C. Jain, University of Canberra, Canberra, Australia; L. Nanni, A. Lumini, Università di Bologna, Cesena, Italy (Eds.)

Local Binary Patterns: New Variants and Applications

This book introduces Local Binary Patterns (LBP), arguably one of the most powerful texture descriptors, and LBP variants. This volume provides the latest reviews of the literature and a presentation of some of the best LBP variants by researchers at the forefront of textual analysis research and research on LBP descriptors and variants. The value of LBP variants is illustrated with reported experiments using many databases representing a diversity of computer vision applications in medicine, biometrics, and other areas. There is also a chapter that provides an excellent theoretical foundation for texture analysis and LBP in particular. A special section focuses on LBP and LBP[...]

Features

This book introduces Local Binary Patterns (LBP), arguably one of the most powerful texture descriptors, and LBP variants. This volume provides the latest reviews of the literature and a presentation of some of the best LBP variants by researchers at the forefront of textual analysis research and research on LBP descriptors and variants. The value of LBP variants is illustrated with reported experiments using [...]

Contents

Introduction to LBP: New Variants and New Applications by Sheryl Brahnam, Lakhmi C. Jain, Alessandra Lumini, Loris Nanni.- A Unifying Framework for LBP and Related Methods, Francesco Bianconi and Antonio Fernández.- Local Phase Quantization for Blur Insensitive Texture Description, Janne Heikkilä, Esa Rahtu, and Ville Ojansivu.- The Geometric Local Textural Patterns (GLTP) Technique, S. A. Orjuela Vargas, J. P. Yañez Puentes, and W. Philips.- Local Configuration Features and Discriminative Learnt Features for Texture Description, Yimo Guo, Guoying Zhao, and Matti Pietikäinen.- [...]

Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics); Image Processing and Computer Vision

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-39288-7

Hardcover

2014. X, 271 p. 93 illus., 5 illus. in color. (Studies in Computational Intelligence, Vol. 506)

\$129.00

ISBN 978-3-642-39288-7

usually dispatched within 3 to 5 business days

F. Barthelat, McGill University, Montreal, Canada; P. Zavattieri, Purdue University, West Lafayette, USA; C.S. Korach, State University of New York, Stony Brook, USA; B.C. Prorok, Auburn University, Auburn, USA; K.J. Grande-Allen, Rice University, Houston, USA (Eds.)

Mechanics of Biological Systems and Materials, Volume 4

Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics

Mechanics of Biological Systems and Materials, Volume 4: Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics, the fourth volume of eight from the Conference, brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on a wide range of areas, including: Structure-Function & Design of Soft Biological Tissues Soft Tissue Biomechanics: Nanoscale to Physiological Control Bone Mechanics- Biomimetic Materials Residual Stresses in Biological Materials Cells Cellulose Materials

Features

Mechanics of Biological Systems and Materials, Volume 4: Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics, the fourth volume of eight from the Conference, brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on a wide range of areas, including: Structure-Function [...]

Contents

From the Contents: Study of the Transient Response of Tympanic Membranes Under Acoustic Excitation.- Directional Failure of Tendons in the Presence of a Notch Defect.- Age and Regional Dependence of Collagen Crimp in Heart Valves.- The Cohesive law and Toughness of Engineering and Natural Adhesives.- Comparing the Passive Biomechanics of Tension-pressure Loading of Porcine Renal Arteries and its First Branch.- Indentation Measurements on Soft Materials Using Optical Surface Deformation Measurements.- Cadaveric Femoral Fracture Experiment in a Fall on the Hip Configuration.

Fields of interest

Theoretical and Applied Mechanics; Biomaterials; Biomedical Engineering

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-00776-2

Hardcover

2014. VIII, 189 p. 149 illus. (Conference Proceedings of the Society for Experimental Mechanics Series)

\$259.00

ISBN 978-3-319-00776-2

usually dispatched within 3 to 5 business days

T. Březina, Brno University of Technology, Brno, Czech Republic;
R. Jabłoński, Warsaw University of Technology, Warsaw, Poland
(Eds.)

Mechatronics 2013

Recent Technological and Scientific Advances

Mechatronics, as the integrating framework of mechanical engineering, electrical engineering, computer technology, control engineering and automation forms a crucial part in the design, manufacture and maintenance of a wide range of engineering products and processes. The mechatronics itself changes rapidly in last decade, from original mixture of subfields into original approach in engineering as a technical discipline. The book you are holding is aimed to help the reader to orient in this evolving field of science and technology. "Mechatronics 2013: Recent Technological and Scientific Advances" is the fourth volume following the previous editions in 2007, 2009 and 2011, providing the[...]

Features

Mechatronics, as the integrating framework of mechanical engineering, electrical engineering, computer technology, control engineering and automation forms a crucial part in the design, manufacture and maintenance of a wide range of engineering products and processes. The mechatronics itself changes rapidly in last decade, from original mixture of subfields into original approach in engineering as a [...]

Contents

Design, Modeling and Simulation of Mechatronic systems.- Electrical Machines, Drives & Power Electronics.- Measurement and Diagnostics.- Robotics.- Control and Automation.- Biomedical and Biomechanical Engineering.- Mechatronic Education.

Fields of interest

Mechatronics; Robotics and Automation

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-02293-2

Hardcover

2014. XVI, 902 p. 630 illus.

\$399.00

ISBN 978-3-319-02293-2

usually dispatched within 3 to 5 business days

K. Grąbczewski

Meta-Learning in Decision Tree Induction

The book focuses on different variants of decision tree induction but also describes the meta-learning approach in general which is applicable to other types of machine learning algorithms. The book discusses different variants of decision tree induction and represents a useful source of information to readers wishing to review some of the techniques used in decision tree learning, as well as different ensemble methods that involve decision trees. It is shown that the knowledge of different components used within decision tree learning needs to be systematized to enable the system to generate and evaluate different variants of machine learning algorithms with the aim of identifying[...]

Features

The book focuses on different variants of decision tree induction but also describes the meta-learning approach in general which is applicable to other types of machine learning algorithms. The book discusses different variants of decision tree induction and represents a useful source of information to readers wishing to review some of the techniques used in decision tree learning, as well as [...]

Contents

Introduction.- Techniques of decision tree induction.- Multivariate decision trees.- Unified view of decision tree induction algorithms.- Intermi—advanced meta-learning framework.- Meta-level analysis of decision tree induction.

Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00959-9

Hardcover

2014. XVI, 343 p. 33 illus. (Studies in Computational Intelligence, Vol. 498)

\$179.00

ISBN 978-3-319-00959-9

usually dispatched within 3 to 5 business days

J.J.(H. Park, Seoul University of Science & Seoul, Korea, Republic of (South Korea); H. Adeli, Ohio State University, Columbus, USA; N. Park, I. Woungang, Ryerson University, Toronto, Canada (Eds.)

Mobile, Ubiquitous, and Intelligent Computing

MUSIC 2013

MUSIC 2013 will be the most comprehensive text focused on the various aspects of Mobile, Ubiquitous and Intelligent computing. MUSIC 2013 provides an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of intelligent technologies in mobile and ubiquitous computing environment. MUSIC 2013 is the next edition of the 3rd International Conference on Mobile, Ubiquitous, and Intelligent Computing (MUSIC-12, Vancouver, Canada, 2012) which was the next event in a series of highly successful International Workshop on Multimedia, Communication and Convergence technologies MCC-11 (Crete, Greece, June 2011), MCC-10 (Cebu, Philippines, August 2010).

Features

MUSIC 2013 will be the most comprehensive text focused on the various aspects of Mobile, Ubiquitous and Intelligent computing. MUSIC 2013 provides an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of intelligent technologies in mobile and ubiquitous computing environment. MUSIC 2013 is the next edition of the 3rd International Conference on Mobile, [...]

Contents

A Novel Ranking Technique based on Page Queries; Gwangbum Pyun, Unil Yun.- Ranking Book Reviews based on User Discussion; Heungmo Ryang, Unil Yun.- The Blog Ranking Algorithm using Analysis of both Blog Influence and Characteristics of Blog posts; Jiwon Kim, Unil Yun.- Frequent Graph Mining based on Multiple Minimum Support Constraints; Gangin Lee, Unil Yun.- Design of Automatic Paper Identification System with QR code for Digital Forensics; Ha-Kyung Jennifer Lee, Young-Mi Yun, Kee-Hyung Yoon, Dong-Sub Cho.- Processing Continuous Range Queries with Non-Spatial Selections; HaRim Jung, [...]

Fields of interest

Communications Engineering, Networks; User Interfaces and Human Computer Interaction; Computer Engineering

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-40674-4

Hardcover

2014. XXII, 651 p. 276 illus. (Lecture Notes in Electrical Engineering, Vol. 274)

\$229.00

ISBN 978-3-642-40674-4

usually dispatched within 3 to 5 business days

S.K. Sinha, Indian Institute of Technology, Kanpur, India; N. Satyanarayana, National University of Singapore, Singapore, Singapore; S.C. Lim, National University of Singapore, Singapore, Singapore (Eds.)

Nano-tribology and Materials in MEMS

This book brings together recent developments in the areas of MEMS tribology, novel lubricants and coatings for nanotechnological applications, biomimetics in tribology and fundamentals of micro/nano-tribology. Tribology plays important roles in the functioning and durability of machines at small length scales because of the problems associated with strong surface adhesion, friction, wear etc. Recently, a number of studies have been conducted to understand tribological phenomena at nano/micro scales and many new tribological solutions for MEMS have been proposed.

Features

This book brings together recent developments in the areas of MEMS tribology, novel lubricants and coatings for nanotechnological applications, biomimetics in tribology and fundamentals of micro/nano-tribology. Tribology plays important roles in the functioning and durability of machines at small length scales because of the problems associated with strong surface adhesion, friction, wear etc. Recently, a [..]

Contents

Formation of arrayed Au nanoparticles on SiO₂/Si substrate by use of dewetting phenomenon: An example of bottom-up technologies in MEMS.- Nanofriction by Reciprocating Sliding.- The structure and tribological behaviors of nanostructure thin films.- Detection of lateral forces and formation of atomic chains.- Reducing friction force on silicon surface using submicron- to atomic-scale geometry effects.- Microfabricated sleds for friction studies.- Vapor Phase Lubrication-Nanotribology Fundamentals and MEMS Applications.- A Novel Method of Lubrication of Micro-Electro-Mechanical Systems.- [..]

Fields of interest

Nanotechnology and Microengineering; Tribology, Corrosion and Coatings; Mechatronics

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-36934-6

Hardcover

2013. VIII, 275 p. 157 illus., 89 illus. in color.

\$179.00

ISBN 978-3-642-36934-6

usually dispatched within 3 to 5 business days

G. Terrazas, University of Nottingham, Nottingham, United Kingdom; F.E.B. Otero, A.D. Masegosa, University of Granada, Granada, Spain (Eds.)

Nature Inspired Cooperative Strategies for Optimization (NICSO 2013)

Learning, Optimization and Interdisciplinary Applications

Biological and other natural processes have always been a source of inspiration for computer science and information technology. Many emerging problem solving techniques integrate advanced evolution and cooperation strategies, encompassing a range of spatio-temporal scales for visionary conceptualization of evolutionary computation. This book is a collection of research works presented in the VI International Workshop on Nature Inspired Cooperative Strategies for Optimization (NICSO) held in Canterbury, UK. Previous editions of NICSO were held in Granada, Spain (2006 & 2010), Acireale, Italy (2007), Tenerife, Spain (2008), and Cluj-Napoca, Romania (2011). NICSO 2013 and this book[...]

Features

Biological and other natural processes have always been a source of inspiration for computer science and information technology. Many emerging problem solving techniques integrate advanced evolution and cooperation strategies, encompassing a range of spatio-temporal scales for visionary conceptualization of evolutionary computation. This book is a collection of research works presented in the VI [..]

Contents

Extending the ABC-Miner Bayesian Classification Algorithm.- A Multiple Pheromone Ant Clustering Algorithm.- An Island Memetic Differential Evolution Algorithm for the Feature Selection Problem.- Using a Scouting Predator-Prey Optimizer to Train Support Vector Machines with non PSD Kernels.- Response Surfaces with Discounted Information for Global Optima Tracking in Dynamic Environments.- Fitness based Self Adaptive Differential.- Adaptation schemes and dynamic optimization problems: a basic study on the Adaptive Hill Climbing Memetic Algorithm.- Using base position errors in an[...]

Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01691-7

Hardcover

2014. XIV, 355 p. 82 illus., 12 illus. in color. (Studies in Computational Intelligence, Vol. 512)

\$179.00

ISBN 978-3-319-01691-7

usually dispatched within 3 to 5 business days

D. Pîslă, Technical University of Cluj-Napoca, Cluj-Napoca, Romania; H. Bleuler, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland; A. Rodic, Mihailo Pupin Institute, Belgrade, Serbia (Yugoslavia); C. Vaida, Technical University of Cluj-Napoca, Cluj-Napoca, Romania; A. Pîslă, Technical University of Cluj-Napoca, Cluj-Napoca, Romania (Eds.)

New Trends in Medical and Service Robots

Theory and Integrated Applications

This book contains mainly the selected papers of the First International Workshop on Medical and Service Robots, held in Cluj-Napoca, Romania, in 2012. The high quality of the scientific contributions is the result of a rigorous selection and improvement based on the participants' exchange of opinions and extensive peer-review. This process has led to the publishing of the present collection of 16 independent valuable contributions and points of view and not as standard symposium or conference proceedings. The addressed issues are: Computational Kinematics, Mechanism Design, Linkages and Manipulators, Mechanisms for Biomechanics, Mechanics of Robots, Control Issues for Mechanical[...]

Features

This book contains mainly the selected papers of the First International Workshop on Medical and Service Robots, held in Cluj-Napoca, Romania, in 2012. The high quality of the scientific contributions is the result of a rigorous selection and improvement based on the participants' exchange of opinions and extensive peer-review. This process has led to the publishing of the present collection of 16 [..]

Contents

Preface.- Haptics in Robotics, Man-Machine Interface and Neuroscience, by H. Bleuler, and M. Bouri.- Smart Units to Support Competitive Design of Control Systems in Surgical Robotics, by S. Brad, and M. Murar.- Problems and Experiences on Cable-Based Service Robots for Physiotherapy Applications, by M. Ceccarelli.- Resistive Torques in Rehabilitation Engineering Equipments, by B. Chetran, S. Jişă and D. Măndru.- New Trends in Service Robotics, by V. Ciupe and I. Maniu.- Automated Book Manipulator in Libraries, by A. Comsa, I. Maniu, N. Modler, E.-Ch. Lovasz and V. Ciupe.- Robot-Assisted[...]

Fields of interest

Robotics and Automation; Biomedical Engineering; Mechanical Engineering

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-319-01591-0

Hardcover

2014. VIII, 238 p. 167 illus., 127 illus. in color. (Mechanisms and Machine Science, Vol. 16)

\$129.00

ISBN 978-3-319-01591-0

usually dispatched within 3 to 5 business days

M.S. Ansari, Aligarh Muslim University, Aligarh, India

R.N. Jazar, L. Dai (Eds.)

J.-E. Vinnem, University of Stavanger, Stavanger, Norway

Non-Linear Feedback Neural Networks

VLSI Implementations and Applications

This book aims to present a viable alternative to the Hopfield Neural Network (HNN) model for analog computation. It is well known the standard HNN suffers from problems of convergence to local minima, and requirement of a large number of neurons and synaptic weights. Therefore, improved solutions are needed. The non-linear synapse neural network (NoSyNN) is one such possibility and is discussed in detail in this book. This book also discusses the applications in computationally intensive tasks like graph coloring, ranking, and linear as well as quadratic programming. The material in the book is useful to students, researchers and academicians working in the area of analog computation.

Features

This book aims to present a viable alternative to the Hopfield Neural Network (HNN) model for analog computation. It is well known that the standard HNN suffers from problems of convergence to local minima, and requirement of a large number of neurons and synaptic weights. Therefore, improved solutions are needed. The non-linear synapse neural network (NoSyNN) is one such possibility and is discussed in detail [...]

Contents

Introduction.- Background.- Voltage-mode Neural Network for the Solution of Linear Equations.- Mixed-mode Neural Circuit for Solving Linear Equations.- Non-Linear Feedback Neural Circuits for Linear and Quadratic Programming.- OTA-based Implementations of Mixed-mode Neural Circuits.- Appendix A: Mixed-mode Neural Network for Graph Colouring.- Appendix B: Mixed-mode Neural Network for Ranking.

Fields of interest

Computational Intelligence; Circuits and Systems; Mathematical Models of Cognitive Processes and Neural Networks; Electronics and Microelectronics, Instrumentation

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-81-322-1562-2

Hardcover

2014. XXII, 201 p. 79 illus. (Studies in Computational Intelligence, Vol. 508)

\$129.00

ISBN 978-81-322-1562-2

usually dispatched within 3 to 5 business days

Nonlinear Approaches in Engineering Applications 2

Nonlinear Approaches in Engineering Applications 2 focuses on the application of nonlinear approaches to different engineering and science problems. The selection of the topics for this book is based on the best papers presented in the ASME 2010 and 2011 in the tracks of Dynamic Systems and Control, Optimal Approaches in Nonlinear Dynamics and Acoustics, both of which were organized by the editors. For each selected topic, detailed concept development, derivations and relevant knowledge are provided for the convenience of the readers. The topics that have been selected are of great interest in the fields of engineering and physics and this book is designed to appeal to engineers and [...]

Features

Nonlinear Approaches in Engineering Applications 2 focuses on the application of nonlinear approaches to different engineering and science problems. The selection of topics for this book is based on the best papers presented in the ASME 2010 and 2011 in the tracks of Dynamic Systems and Control, Optimal Approaches in Nonlinear Dynamics and Acoustics, both of which were organized by the editors. For [...]

Contents

Part I: Analytical Nonlinearity.- Smart Flat Ride Tuning.- Light-Tracking Kinematics of Mobile Platform.- Diagnosis and Control of Nonlinear Oscillations of a Fluttering Plate.- A New Approach to the Tracking Control of Uncertain Nonlinear Multi-body Mechanical Systems.- Robustness of Orthogonal Eigenstructure Control to Actuators Failure.- Part II Practical Nonlinearity.- Energy Harvesting from Flows Using Piezoelectric Patches.- Experimental and Finite Element Nonlinear Dynamics Analysis of Formula SAE Impact Attenuator.- Nonlinear Vehicle Seat BSR characterization using CAE [...]

Fields of interest

Vibration, Dynamical Systems, Control; Control; Calculus of Variations and Optimal Control; Optimization

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-6876-9

Hardcover

2014. XII, 317 p. 244 illus., 146 illus. in color.

\$179.00

ISBN 978-1-4614-6876-9

usually dispatched within 3 to 5 business days

Offshore Risk Assessment vol 1.

Principles, Modelling and Applications of QRA Studies

Offshore Risk Assessment was the first book to deal with quantified risk assessment (QRA) as applied specifically to offshore installations and operations. Risk assessment techniques have been used for more than three decades in the offshore oil and gas industry, and their use is set to expand increasingly as the industry moves into new areas and faces new challenges in older regions. This updated and expanded third edition has been informed by a major R&D program on offshore risk assessment in Norway and summarizes research from 2006 to the present day. Rooted with a thorough discussion of risk metrics and risk analysis methodology, subsequent chapters are devoted to analytical [...]

Features

Offshore Risk Assessment was the first book to deal with quantified risk assessment (QRA) as applied specifically to offshore installations and operations. Risk assessment techniques have been used for more than three decades in the offshore oil and gas industry, and their use is set to expand increasingly as the industry moves into new areas and faces new challenges in older [...]

Contents

Part I.- 1.Introduction.- 2.Risk Picture: Definitions and Characteristics.- 3.Risk Assessment process and Main Elements.- 4.Lessons from Major Accidents.- 5.Lessons from Macondo Accident.- Part II.- 6.The Occurrence of Hydrocarbon Leaks: Process Systems.- 7.Fire Risk Modelling.- 8.Explosion Risk Modelling.- 9.Collision Risk Modelling.- 10.Marine Systems Risk Modelling.- 11.Risk due to Miscellaneous Hazards.- 12.Fatality Risk Assessment.- 13.Helicopter Transportation Fatality Risk Assessment.

Fields of interest

Quality Control, Reliability, Safety and Risk; Environmental Management; Offshore Engineering; Mathematical Modeling and Industrial Mathematics

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-1-4471-5206-4

Hardcover

2014. XLII, 570 p. 159 illus., 22 illus. in color. (Springer Series in Reliability Engineering)

\$119.00

ISBN 978-1-4471-5206-4

usually dispatched within 3 to 5 business days

P.A. Muñoz-Rojas, Santa Catarina State University - UDESC,
Joinville, Brazil (Ed.)

Optimization of Structures and Components

Written by an international group of active researchers in the field, this volume presents innovative formulations and applied procedures for sensitivity analysis and structural design optimization. Eight chapters discuss subjects ranging from recent developments in the determination and application of topological gradients, to the use of evolutionary algorithms and meta-models to solve practical engineering problems. With such a comprehensive set of contributions, the book is a valuable source of information for graduate students and researchers entering or working in the matter.

Features

Written by an international group of active researchers in the field, this volume presents innovative formulations and applied procedures for sensitivity analysis and structural design optimization. Eight chapters discuss subjects ranging from recent developments in the determination and application of topological gradients, to the use of evolutionary algorithms and meta-models to solve practical engineering [...]

Contents

Topological Derivative For Multi-Scale Linear Elasticity Models In Three Spatial Dimensions.- Topological Sensitivity Analysis for Two-Dimensional Heat Transfer Problems using the Boundary Element Method.- Topology Optimization of Compliant Mechanisms with Stress.

Fields of interest

Theoretical and Applied Mechanics; Optimization; Characterization and Evaluation of Materials

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00716-8

Hardcover

2013. VII, 141 p. 80 illus., 32 illus. in color. (Advanced Structured Materials, Vol. 43)

\$129.00

ISBN 978-3-319-00716-8

usually dispatched within 3 to 5 business days

A. Gajurel, Tribhuvan University, Kathmandu, Nepal

Performance-Based Contracts for Road Projects

Comparative Analysis of Different Types

This book focuses on the aspects of contracting contracts, basically related to road construction and management contracts. The book presents an analytical study of Performance-Based Road Management and Maintenance (PMMR), Funktionsbaupvertrag (FBV) (Function-Based Construction Contract) and Public Private Partnerships (PPP). A separate chapter is also included about the comparative study of these contract types. The book provides useful material for university libraries, construction companies and government departments of construction.

Features

This book focuses on the aspects of contracting contracts, basically related to road construction and management contracts. The book presents an analytical study of Performance-Based Road Management and Maintenance (PMMR), Funktionsbaupvertrag (FBV) (Function-Based Construction Contract) and Public Private Partnerships (PPP). A separate chapter is also included about the comparative study of these contract [...]

Contents

Introduction.- Project Delivery Systems (PDS).- Performance-Based Contracts (PBC).- Comparative Study on Construction Contracts.- Case Studies.- Conclusion.

Fields of interest

Construction Management; Civil Engineering; Engineering Economics, Organization, Logistics, Marketing; Civil Law

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-81-322-1301-7

Hardcover

2014. XXV, 159 p. 40 illus.

\$129.00

ISBN 978-81-322-1301-7

usually dispatched within 3 to 5 business days

Z. Şen, Istanbul Technical University, Istanbul, Turkey

Philosophical, Logical and Scientific Perspectives in Engineering

This book highlights and explains the significance of philosophical, logical, and scientific principles for engineering education/training and engineering works. In so doing, it aims to help to rectify the neglect of philosophy and logic in current education and training programs, which emphasize analytical and numerical methods at the expense of the innovative practical and creative abilities so important for engineering in the past. Individual chapters examine the relation of philosophy, logic, and science to engineering, drawing attention to, for example, the significance of ethics, the relevance of the philosophy of science, and the increasing importance of application of fuzzy[...]

Features

This book highlights and explains the significance of philosophical, logical, and scientific principles for engineering education/training and engineering works. In so doing, it aims to help to rectify the neglect of philosophy and logic in current education and training programs, which emphasize analytical and numerical methods at the expense of the innovative practical and creative abilities so important for [...]

Contents

Introduction.- Intelligent Reasoning Elements.- Philosophy and Engineering.- Logic and Engineering.- Science and Engineering.- Education and Engineering.- Future Trends.

Fields of interest

Computational Intelligence; Philosophy of Technology; Engineering Design; Science Education

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01741-9

Hardcover

2014. XI, 260 p. 71 illus. (Intelligent Systems Reference Library, Vol. 143)

\$129.00

ISBN 978-3-319-01741-9

usually dispatched within 3 to 5 business days

K. Bergman, Columbia University, New York, USA; L.P. Carloni, Columbia University, New York, USA; A. Biberman, Columbia University, New York, USA; J. Chan, Columbia University, New York, USA; G. Hendry, Columbia University, New York, USA

Photonic Network-on-Chip Design

This book provides a comprehensive synthesis of the theory and practice of photonic devices for network-on-chip. It outlines the issues in designing photonic network-on-chip architectures for future many-core high performance chip multiprocessors. The discussion is built from the bottom up: starting with the design and implementation of key photonic devices and building blocks, reviewing networking and network-on-chip theory and existing research, and finishing with describing various architectures, their characteristics, and the impact they will have on a computing system. After acquainting the reader with all the issues in the design space, the discussion concludes with design[...]

Features

This book is a product of an emerging interdisciplinary field that is bringing photonic communications to address many of the challenges associated with scaling computing systems performance. In addressing this cross-disciplinary topic the book bridges the gap among the devices, tools, and architectures for realizing photonic interconnection networks in future computing. This book provides: A [...]

Contents

Introduction.- Photonic Interconnects.- Silicon Photonics.- Photonic Simulation and Design Space.- Photonic Network Architectures I: Circuit Switching.- Photonic Network Architectures II: Wave-length Arbitration and Routing.- Photonic Network Architectures III: Advanced Photonic Architectures.- Conclusions.

Fields of interest

Circuits and Systems; Microwaves, RF and Optical Engineering; Classical Electrodynamics, Wave Phenomena

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4419-9334-2

Hardcover

2014. X, 213 p. 132 illus., 117 illus. in color. (Integrated Circuits and Systems, Vol. 68)

\$129.00

ISBN 978-1-4419-9334-2

usually dispatched within 3 to 5 business days

H.J. Eom, KAIST, Daejeon, Korea, Republic of (South Korea)

Primary Theory of Electromagnetics

This is a textbook on electromagnetics for undergraduate students in electrical engineering, information, and communications. The book contents are very compact and brief compared to other commonly known electromagnetic books for undergraduate students and emphasizes mathematical aspects of basic electromagnetic theory. The book presents basic electromagnetic theory starting from static fields to time-varying fields. Topics are divided into static electric fields, static magnetic fields, time-varying fields, and electromagnetic waves. The goal of this textbook is to lead students away from memorization, but towards a deeper understanding of formulas that are used in electromagnetic[...]

Features

This is a textbook on electromagnetics for undergraduate students in electrical engineering, information, and communications. The book contents are very compact and brief compared to other commonly known electromagnetic books for undergraduate students and emphasizes mathematical aspects of basic electromagnetic theory. The book presents basic electromagnetic theory starting from static fields to [...]

Contents

1 Vectors.- 2 Electrostatics.- 3 Magnetostatics.- 4 Faraday's Law of Induction.- 5 Maxwell's Equations.- 6 Uniform Plane Waves.- 7 Transmission Lines.- 8 Waveguides and Antennas.- A Symbols, Notations, and Acronyms.- B Vector Formulas.- C Gradients, Divergences, Curls, and Laplacians.- D Dirac Delta Functions.- E Answers to Problems.- Index.

Fields of interest

Power Electronics, Electrical Machines and Networks; Classical Electrodynamics, Wave Phenomena; Microwaves, RF and Optical Engineering

Target groups

Upper undergraduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-94-007-7142-0

Hardcover

2013. IX, 205 p. 148 illus. (Power Systems)

\$89.99

ISBN 978-94-007-7142-0

usually dispatched within 3 to 5 business days

J.F. Ferreira, J.M. Dias

Probabilistic Approaches to Robotic Perception

This book tries to address the following questions: How should the uncertainty and incompleteness inherent to sensing the environment be represented and modelled in a way that will increase the autonomy of a robot? How should a robotic system perceive, infer, decide and act efficiently? These are two of the challenging questions robotics community and robotic researchers have been facing. The development of robotic domain by the 1980s spurred the convergence of automation to autonomy, and the field of robotics has consequently converged towards the field of artificial intelligence (AI). Since the end of that decade, the general public's imagination has been stimulated by high[...]

Features

This book tries to address the following questions: How should the uncertainty and incompleteness inherent to sensing the environment be represented and modelled in a way that will increase the autonomy of a robot? How should a robotic system perceive, infer, decide and act efficiently? These are two of the challenging questions robotics community and robotic researchers have been facing. The [...]

Contents

Probabilistic Modelling for Robotic Perception.- Probabilistic Approaches for Robotic Perception in Practice.

Fields of interest

Robotics and Automation; Artificial Intelligence (incl. Robotics); Cognitive Psychology; Image Processing and Computer Vision; Signal, Image and Speech Processing

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-02005-1

Hardcover

2014. XXX, 242 p. 89 illus., 79 illus. in color. (Springer Tracts in Advanced Robotics, Vol. 91)

\$119.00

ISBN 978-3-319-02005-1

usually dispatched within 3 to 5 business days

J. Sarrate, M. Staten (Eds.)

Proceedings of the 22nd International Meshing Roundtable

This volume contains the articles presented at the 22nd International Meshing Roundtable (IMR) organized, in part, by Sandia National Laboratories and was held on Oct 13-16, 2013 in Orlando, Florida, USA. The first IMR was held in 1992, and the conference series has been held annually since. Each year the IMR brings together researchers, developers, and application experts in a variety of disciplines, from all over the world, to present and discuss ideas on mesh generation and related topics. The technical papers in this volume present theoretical and novel ideas and algorithms with practical potential, as well as technical applications in science and engineering, geometric modeling, [...]

Features

This volume contains the articles presented at the 22nd International Meshing Roundtable (IMR) organized, in part, by Sandia National Laboratories and was held on Oct 13-16, 2013 in Orlando, Florida, USA. The first IMR was held in 1992, and the conference series has been held annually since. Each year the IMR brings together researchers, developers, and application experts in a variety of [...]

Contents

Quad and Hex meshing.- Tri and Tet meshing.- Quality Optimization and Adaptivity.

Fields of interest

Appl. Mathematics / Computational Methods of Engineering; Mathematical Applications in Computer Science; Simulation and Modeling

Target groups
Research

Type of publication
Proceedings

More on www.springer.com/978-3-319-02334-2

Hardcover

2014. XIV, 600 p. 312 illus., 221 illus. in color.

\$349.00

ISBN 978-3-319-02334-2

usually dispatched within 3 to 5 business days

A. Talamelli, Università di Bologna, Forlì, Italy; M. Oberlack, TU Darmstadt, Darmstadt, Germany; J. Peinke (Eds.)

Progress in Turbulence V

Proceedings of the iTi Conference in Turbulence 2012

This volume collects the edited and reviewed contributions presented in the 5th iTi Conference in Bertinoro covering fundamental aspects in turbulent flows. In the spirit of the iTi initiative, the volume is produced after the conference so that the authors had the possibility to incorporate comments and discussions raised during the meeting. Turbulence presents a large number of aspects and problems, which are still unsolved and which challenge research communities in engineering and physical sciences both in basic and applied research. The book presents recent advances in theory related to new statistical approaches, effect of non-linearities and presence of symmetries. This edition [...]

Features

This volume collects the edited and reviewed contributions presented in the 5th iTi Conference in Bertinoro, covering fundamental aspects in turbulent flows. In the spirit of the iTi initiative, the volume is produced after the conference so that the authors had the possibility to incorporate comments and discussions raised during the meeting. Turbulence presents a large number of [...]

Contents

Theory - "In memory of Prof. Rudolf Friedrich".- Stability.- Wall bounded flows.- Complex flows.- Acoustic.- Numerical methods.

Fields of interest

Complexity; Engineering Fluid Dynamics; Vibration, Dynamical Systems, Control; Nonlinear Dynamics; Fluid- and Aerodynamics; Partial Differential Equations

Target groups
Research

Type of publication
Proceedings

More on www.springer.com/978-3-319-01859-1

Hardcover

2014. XIV, 238 p. 117 illus., 68 illus. in color. (Springer Proceedings in Physics, Vol. 149)

\$199.00

ISBN 978-3-319-01859-1

usually dispatched within 3 to 5 business days

M. Rossi, Università Politecnica delle Marche, Ancona, Italy; M. Sasso, Università Politecnica delle Marche, Ancona, Italy; N. Connesson, University of Joseph Fourier, Grenoble, France; R. Singh, Oklahoma State University, Tulsa, USA; A. DeWald, Hill Engineering, LLC, Rancho Cordova, USA; D. Backman, National Research Council Canada, Ottawa, Canada; P. Gloeckner, Cummins, Inc., Columbus, USA (Eds.)

Residual Stress, Thermomechanics & Infrared Imaging, Hybrid Techniques and Inverse Problems, Volume 8

Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics

Residual Stress, Thermomechanics & Infrared Imaging, Hybrid Techniques and Inverse Problems, Volume 8: Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics, the eighth volume of eight from the Conference, brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on a wide range of areas, including: Advances in Residual Stress Measurement Methods Residual Stress Effects on Material Performance Optical, Ultrasonic, and Diffraction Methods for Residual Stress Measurement Thermomechanics & Infrared Imaging Inverse Methods Inverse Methods in Plasticity Applications in Experimental Mechanics

Features

This critical collection presents early findings and case studies on a wide range of areas, as presented in the Proceedings of the 2013 Annual Conference on Experimental and Applied Mechanics. The collection includes papers in the following general technical research areas: • Advances in Residual Stress Measurement Methods • Residual Stress Effects on Material Performance • Optical, [...]

Contents

From the Contents: Analysis of Thrust Production in Small Synthetic Flapping Wings.- Coarse-resolution Cone-beam Scanning of Logs Using Eulerian CT Reconstruction. Part I: Discretization and Algorithm.- Coarse-resolution Cone-beam Scanning of Logs Using Eulerian CT Reconstruction. Part II: Hardware Design and Demonstration.- Crack Nucleation Threshold Under Fretting Loading by a Thermal Method.- Crack Growth Study of Fibre Metal Laminates Using Thermoelastic Stress Analysis.- Crack Detection in Large Welded Components Under Fatigue Using TSA.- Hybrid Thermoelastic Analysis of an [...]

Fields of interest

Mechanical Engineering; Engineering Thermodynamics, Heat and Mass Transfer; Continuum Mechanics and Mechanics of Materials

Target groups
Research

Type of publication
Proceedings

More on www.springer.com/978-3-319-00875-2

Hardcover

2014. IX, 377 p. 326 illus., 207 illus. in color. (Conference Proceedings of the Society for Experimental Mechanics Series)

\$259.00

ISBN 978-3-319-00875-2

usually dispatched within 3 to 5 business days

F.L. Bars, ENSTA Bretagne, Brest Cedex 9, France; L. Jaulin, ENSTA Bretagne, Brest Cedex 9, France (Eds.)

Robotic Sailing 2013

Proceedings of the 6th International Robotic Sailing Conference

An autonomous sailboat robot is a boat that only uses the wind on its sail as propelling force, without remote control or human assistance to achieve its mission. This involves autonomy in energy (using batteries, solar panels, turbines...), sensor data processing (compass, GPS, wind sensor...), actuators control (rudder and sail angle control...) and decision making (embedded computer with adequate algorithms). Although robotic sailing is a relatively new field of research, several applications exist for this type of robots: oceanographic and hydrographic research, maritime environment monitoring, meteorology, harbor safety, assistance and rescue in dangerous areas...Over the last[...]

Features

An autonomous sailboat robot is a boat that only uses the wind on its sail as propelling force, without remote control or human assistance to achieve its mission. This involves autonomy in energy (using batteries, solar panels, turbines...), sensor data processing (compass, GPS, wind sensor...), actuators control (rudder and sail angle control...) and decision making (embedded computer with adequate [...])

Contents

Part I Hardware design.- Part II Energy and power management strategies.- Part III Modeling, simulation, control, and stability analysis.- Part IV High level control architectures and algorithms.

Fields of interest

Robotics and Automation; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-02275-8

Hardcover

2014. XIV, 149 p. 62 illus., 41 illus. in color.

\$129.00

ISBN 978-3-319-02275-8

usually dispatched within 3 to 5 business days

S. Nepal, CSIRO ICT Centre, Marsfield, Australia; M. Pathan, Telstra Corporation Limited, Melbourne, Australia (Eds.)

Security, Privacy and Trust in Cloud Systems

The book compiles technologies for enhancing and provisioning security, privacy and trust in cloud systems based on Quality of Service requirements. It is a timely contribution to a field that is gaining considerable research interest, momentum, and provides a comprehensive coverage of technologies related to cloud security, privacy and trust. In particular, the book includes - Cloud security fundamentals and related technologies to-date, with a comprehensive coverage of evolution, current landscape, and future roadmap. - A smooth organization with introductory, advanced and specialist content, i.e. from basics of security, privacy and trust in cloud systems, to advanced cartographic[...]

Features

The book compiles technologies for enhancing and provisioning security, privacy and trust in cloud systems based on Quality of Service requirements. It is a timely contribution to a field that is gaining considerable research interest, momentum, and provides a comprehensive coverage of technologies related to cloud security, privacy and trust. In particular, the book includes - Cloud security fundamentals [...]

Contents

Part I Cloud Computing Fundamentals.- Introduction to cloud computing.- Secure information sharing and data protection in the cloud.- Intra and inter-cloud security, privacy and trust.- Cloud-based eGovernance.- Part II Cloud Security.- Cloud security architecture and protocol.- Secure cloud data management service.- Security and virtualization.- Autonomic security in cloud systems.- Part III Cloud Privacy.- Cryptography and crypto-protocols for cloud systems.- Access control mechanisms.- Risk management in the cloud.- Privacy protection policies in cloud platforms and operations.- Part[...]

Fields of interest

Communications Engineering, Networks; Systems and Data Security; Data Encryption

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-38585-8

Hardcover

2014. XX, 459 p. 146 illus., 95 illus. in color.

\$179.00

ISBN 978-3-642-38585-8

usually dispatched within 3 to 5 business days

C. Skelton, Gotham Innovation Greenhouse, New York, USA

Soft City Culture and Technology

The Betaville Project

Soft City Culture and Technology: The Betaville Project discusses the complete cycle of conception, development, and deployment of the Betaville platform. Betaville is a massively participatory online environment for distributed 3D design and development of proposals for changes to the built environment- an experimental integration of art, design, and software development for the public realm. Through a detailed account of Betaville from a Big Crazy Idea to a working "deep social medium", the author examines the current conditions of performance and accessibility of hardware, software, networks, and skills that can be brought together into a new form of open public design and[...]

Features

Soft City Culture and Technology: The Betaville Project discusses the complete cycle of conception, development, and deployment of the Betaville platform. Betaville is a massively participatory online environment for distributed 3D design and development of proposals for changes to the built environment- an experimental integration of art, design, and software development for the public realm. Through [...]

Contents

Introduction.- Background: Waking Up In A New Soft City.- Strategy.- Development.- Deployments.- Software infrastructure.- Future Roadmaps.- Conclusion.

Fields of interest

Communications Engineering, Networks; Media Design; Software Engineering

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-7250-6

Hardcover

2014. XIII, 170 p. 49 illus., 34 illus. in color.

\$129.00

ISBN 978-1-4614-7250-6

usually dispatched within 3 to 5 business days

A. Costa, University of Aveiro, Aveiro, Portugal; J.M. Guedes, University of Porto, Porto, Portugal; H. Varum, University of Aveiro, Aveiro, Portugal (Eds.)

Structural Rehabilitation of Old Buildings

This present book describes the different construction systems and structural materials and elements within the main buildings typologies, and it analyses the particularities of each of them, including, at the end, general aspects concerning laboratory and in-situ testing, numerical modeling, vulnerability assessment and construction maintenance.

Features

The present book describes the different construction systems and structural materials and solutions within the main old buildings typologies, and it analyses the particularities of each of them, including mechanical properties, structural behaviour, typical damage patterns and collapse mechanisms. Common or pioneering intervention measures to repair and/or strengthen some of these structural elements are [...]

Contents

Introduction and Rehabilitation: Aims & Scopes.- Construction Systems.- Building Materials and Components.- Laboratorial and In-field Tests.- Modeling.- Vulnerability Assessment.- Construction Maintenance.

Fields of interest

Building Repair and Maintenance; Structural Materials; Structural Mechanics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-39685-4

Hardcover

2014. VIII, 348 p. 224 illus., 147 illus. in color. (Building Pathology and Rehabilitation, Vol. 2)

\$129.00

ISBN 978-3-642-39685-4

usually dispatched within 3 to 5 business days

J. Blaauwendraad, J.H. Hoefakker

Structural Shell Analysis

Understanding and Application

The mathematical description of the properties of a shell is much more elaborate than those of beam and plate structures. Therefore many engineers and architects are unacquainted with aspects of shell behaviour and design, and are not familiar with sufficiently reliable shell theories for the different shell types as derived in the middle of the 20th century. Rather than contributing to theory development, this university textbook focuses on architectural and civil engineering schools. Of course, practising professionals will profit from it as well. The book deals with thin elastic shells, in particular with cylindrical, conical and spherical types, and with elliptic and hyperbolic[...]

Features

The mathematical description of the properties of a shell is much more elaborate than those of beam and plate structures. Therefore many engineers and architects are unacquainted with aspects of shell behaviour and design, and are not familiar with sufficiently reliable shell theories for the different shell types as derived in the middle of the 20th century. Rather than contributing to theory development, [...]

Contents

Preface.- 1. Introduction to shells.- Part 1 Membrane Theory and Edge Disturbances.- 2. Membrane theory for shells with principal curvatures.- 3. Membrane theory for shells of arbitrary curvatures.- 4. Application of membrane theory to circular cylindrical shells.- 5. Edge disturbance in circular cylindrical shell under axisymmetric load.- Part 2 Roof Structures.- 6. Donnell bending theory for shallow shells.- 7. Circular cylindrical roof.- 8. Hyperbolic and elliptic paraboloid roofs.- Part 3 Chimneys and Storage Tanks.- 9. Morley bending theory for circular cylindrical shells.- 10.[...]

Fields of interest

Structural Mechanics; Engineering Design; Offshore Engineering; Appl. Mathematics / Computational Methods of Engineering; Engineering (general)

Target groups

Upper undergraduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-94-007-6700-3

Hardcover

2014. XV, 300 p. 148 illus. (Solid Mechanics and Its Applications, Vol. 200)

\$89.99

ISBN 978-94-007-6700-3

usually dispatched within 3 to 5 business days

S. Montani, DISIT, Computer Science Institute, Alessandria, Italy; L.C. Jain, University of Canberra, Canberra, Australia (Eds.)

Successful Case-based Reasoning Applications-2

Case-based reasoning paradigms offer automatic reasoning capabilities which are useful for the implementation of human like machines in a limited sense. This research book is the second volume in a series devoted to presenting Case-based reasoning (CBR) applications. The first volume, published in 2010, testified the flexibility of CBR, and its applicability in all those fields where experiential knowledge is available. This second volume further witnesses the heterogeneity of the domains in which CBR can be exploited, but also reveals some common directions that are clearly emerging in recent years. This book will prove useful to the application engineers, scientists, professors and [...]

Features

Case-based reasoning paradigms offer automatic reasoning capabilities which are useful for the implementation of human like machines in a limited sense. This research book is the second volume in a series devoted to presenting Case-based reasoning (CBR) applications. The first volume, published in 2010, testified the flexibility of CBR, and its applicability in all those fields where experiential [...]

Contents

Cased -Based Reasoning Systems.- A Study of Two-Phase Retrieval for Process-Oriented Case-Based Reasoning.- Evaluating a Case-based Reasoning Architecture for the Intelligent Monitoring of Business Workflows.- The COLIBRI platform: Tools, features and working examples.

Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-38735-7

Hardcover

2014. VII, 162 p. 63 illus. (Studies in Computational Intelligence, Vol. 494)

\$129.00

ISBN 978-3-642-38735-7

usually dispatched within 3 to 5 business days

U. Ramanathan, University of Bedfordshire, Luton, United Kingdom; R. Ramanathan, University of Bedfordshire Business School, Luton, United Kingdom (Eds.)

Supply Chain Strategies, Issues and Models

In the 21st century, supply chain operations and relationships among supply chain partners have become highly challenging, necessitating new approaches, e.g., the development of new models. Supply Chain Strategies, Issues and Models discusses supply chain issues and models with examples from actual industrial cases. Expert authors with a wide spectrum of knowledge working in various areas of supply chain management from various geographical locations offer refreshing, novel and insightful ideas and address possible solutions using established theories and models. Supply Chain Strategies, Issues and Models features studies that have used mathematical modeling, statistical analyses and [...]

Features

In the 21st century, supply chain operations and relationships among supply chain partners have become highly challenging, necessitating new approaches, e.g., the development of new models. Supply Chain Strategies, Issues and Models discusses supply chain issues and models with examples from actual industrial cases. Expert authors with a wide spectrum of knowledge working in various areas of supply [...]

Contents

Supply Chain Complexity And Strategy.- A systematic approach to analyze the information in supply chain collaboration: A conceptual framework.- The Value Of Information Sharing In A Multi-Stage Serial Supply Chain With Positive And Deterministic Lead Times.- Six Sigma in Supply Chain.- A Case Study on E- Kanban implementation: A framework for successful implementation.- A Comparative Study Of Periodic- Review Order-Up-To (T, S) Policy And Continuous-Review (S, S) Policy In A Serial Supply Chain Over A Finite Planning Horizon.- Modeling Of Scheduling Batch Processor In Discrete Parts [...]

Fields of interest

Engineering Economics, Organization, Logistics, Marketing; Production / Logistics; Technology Management

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-1-4471-5351-1

Hardcover

2014. X, 253 p. 62 illus.

\$179.00

ISBN 978-1-4471-5351-1

usually dispatched within 3 to 5 business days

P. Lambert, Université libre de Bruxelles, Brussels, Belgium (Ed.)

Surface Tension in Microsystems

Engineering Below the Capillary Length

This book describes how surface tension effects can be used by engineers to provide mechanical functions in miniaturized products (<1 mm). Even if precursors of this field such as Jurin or Laplace already date back to the 18th century, describing surface tension effects from a mechanical perspective is very recent. The originality of this book is to consider the effects of capillary bridges on solids, including forces and torques exerted both statically and dynamically by the liquid along the 6 degrees-of-freedom. It provides a comprehensive approach to various applications, such as capillary adhesion (axial force), centering force in packaging and micro-assembly (lateral force) and [...]

Features

This book describes how surface tension effects can be used by engineers to provide mechanical functions in miniaturized products (<1 mm). Even if precursors of this field such as Jurin or Laplace already date back to the 18th century, describing surface tension effects from a mechanical perspective is very recent. The originality of this book is to consider the effects of capillary bridges on solids, [...]

Contents

Part I Physical Background.- Part II Static Modelling of Capillary Forces and Torques.- Part III Dynamic Modelling of Capillary Forces.- Part IV Case Studies. Part V Conclusions and Perspectives.

Fields of interest

Engineering Fluid Dynamics; Nanotechnology and Microengineering; Applied and Technical Physics; Nanotechnology; Manufacturing, Machines, Tools

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-37551-4

Hardcover

2013. XXIX, 327 p. 174 illus., 42 illus. in color.

(Microtechnology and MEMS)

\$179.00

ISBN 978-3-642-37551-4

usually dispatched within 3 to 5 business days

N. Sklavos, Technological Institute of Patras, Hellas, Greece; M. Hübner, Ruhr-Universität Bochum, Bochum, Germany; D. Goehring, Ruhr-Universität Bochum, Bochum, Germany; P. Kit-sos, KNOSSOSnet Research Group, Pyrgos, Greece (Eds.)

System-Level Design Methodologies for Telecommunication

This book provides a comprehensive overview of modern networks design, from specifications and modeling to implementations and test procedures, including the design and implementation of modern networks on chip, in both wireless and mobile applications. Topical coverage includes algorithms and methodologies, telecommunications, hardware (including networks on chip), security and privacy, wireless and mobile networks and a variety of modern applications, such as VoLTE and the internet of things.

Features

This book provides a comprehensive overview of modern networks design, from specifications and modeling to implementations and test procedures, including the design and implementation of modern networks on chip, in both wireless and mobile applications. Topical coverage includes algorithms and methodologies, telecommunications, hardware (including networks on chip), security and privacy, wireless and [...]

Contents

Indoor Radio Design – LTE Perspective.- VLC technology for indoor LTE planning.- Voice over LTE (VoLTE) – Service Implementation & Cell Planning Perspective.- 60 GHz Millimeter-Wave WLANs & WPANs: Introduction, System Design, and PHY Layer Challenges.- Modeling the Operation of CMOS Primitive Circuits and MOSFET Devices.- From Hardware Security Tokens to Trusted Computing and Trusted Systems.- Using Codebender and Arduino in Science and Education.- The Internet of Things: How WSNs Fit Into the Picture.- Shape Analysis In Radiotherapy Tumor Surgical Planning Using Segmentation Techniques.

Fields of interest

Circuits and Systems; Communications Engineering, Networks; Computer Systems Organization and Communication Networks

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00662-8

Hardcover

2014. VIII, 176 p. 110 illus., 64 illus. in color.

\$129.00

ISBN 978-3-319-00662-8

usually dispatched within 3 to 5 business days

A. Banerjee, B. Sur, IC Manage, Sunnyvale, USA

SystemC and SystemC-AMS in Practice

SystemC 2.3, 2.2 and SystemC-AMS 1.0

This book describes how engineers can make optimum use of the two industry standard analysis/design tools, SystemC and SystemC-AMS. The authors use a system-level design approach, emphasizing how SystemC and SystemC-AMS features can be exploited most effectively to analyze/understand a given electronic system and explore the design space. The approach taken by this book enables system engineers to concentrate on only those SystemC/SystemC-AMS features that apply to their particular problem, leading to more efficient design. The presentation includes numerous, realistic and complete examples, which are graded in levels of difficulty to illustrate how a variety of systems can be [...]

Features

This book describes how engineers can make optimum use of the two industry standard analysis/design tools, SystemC and SystemC-AMS (SystemC 2.3, 2.2 and SystemC-AMS 1.0). The authors use a system-level design approach, emphasizing how SystemC and SystemC-AMS features can be exploited most effectively to analyze/understand a given electronic system and explore the design space. The approach taken by this [...]

Contents

Introduction to SystemC.- Downloading, Configuring, Installing and Starting with SystemC.- SystemC Simulation Kernel, Data Types, Communication Primitives Concurrency Control and Main Language Constructs.- Primitive Channels -- Concurrency Control.- Modelling Combinational Logic Circuits, Implicit Events, Primitive Communication Channels and Combinations.- Modelling Sequential Logic Circuits, Implicit Events, Primitive Channels and their Combinations.- Explicit SystemC Events -- Notify-Wait.- Hierarchical Combinational-Sequential System Design.- Introduction to SystemC-AMS.- [...]

Fields of interest

Circuits and Systems; Processor Architectures; Electronics and Microelectronics, Instrumentation

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-3-319-01146-2

Hardcover

2014. IX, 460 p. 224 illus., 31 illus. in color.

\$139.00

ISBN 978-3-319-01146-2

usually dispatched within 3 to 5 business days

H.K. Patel, Institute of Technology, Nirma University, Ahmedabad, India

The Electronic Nose: Artificial Olfaction Technology

This book provides the basics of odor, odor analysis techniques, sensors used in odor analysis and overview of odor measurement techniques. For beginners as well researchers this book is a brief guide for odor measurement and analysis. The book includes a special chapter dedicated to practical implementation of e-nose sensor devices with software utility, which guides students to prepare projects and work in practical analysis. It also includes material from early to latest technology research available in the market of e-nose era. Students and researchers who want to learn the basics of biomedical engineering and sensor measurement technology will find this book useful.

Features

This book provides the basics of odor, odor analysis techniques, sensors used in odor analysis and overview of odor measurement techniques. For beginners as well researchers this book is a brief guide for odor measurement and analysis. The book includes a special chapter dedicated to practical implementation of e-nose sensor devices with software utility, which guides students to prepare projects and work [...]

Contents

Measurement Technology.- Sensor.- Biological Olfaction.- Odour.- Towards Sensor to Reproduce Human Sense.- Sensor Used in E-nose.- Sensor Circuits.- Application of Machine Olfaction.

Fields of interest

Biomedical Engineering; Electronics and Microelectronics, Instrumentation; Neurosciences

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-81-322-1547-9

Hardcover

2014. XX, 247 p. 134 illus. (Biological and Medical Physics, Biomedical Engineering)

\$129.00

ISBN 978-81-322-1547-9

usually dispatched within 3 to 5 business days

A. Tsinober, Tel Aviv University, Tel Aviv, Israel

The Essence of Turbulence as a Physical Phenomenon

With Emphasis on Issues of Paradigmatic Nature

This book critically reexamines what turbulence really is, from a fundamental point of view and based on observations from nature, laboratories, and direct numerical simulations. It includes critical assessments and a comparative analysis of the key developments, their evolution and failures, along with key misconceptions and outdated paradigms. The main emphasis is on conceptual and problematic aspects, physical phenomena, observations, misconceptions and unresolved issues rather than on conventional formalistic aspects, models, etc. Apart from the obvious fundamental importance of turbulent flows, this emphasis stems from the basic premise that without corresponding progress in [...]

Features

This book critically reexamines what turbulence really is, from a fundamental point of view and based on observations from nature, laboratories, and direct numerical simulations. It includes critical assessments and a comparative analysis of the key developments, their evolution and failures, along with key misconceptions and outdated paradigms. The main emphasis is on conceptual and problematic aspects, [...]

Contents

PART 1: INTRODUCTION - The phenomenon and the problem of turbulence.- 1 The phenomenon of turbulence.- 2 The problem of turbulence.- 3 What equations describe turbulence adequately?.- PART 2: ISSUES OF PARADIGMATIC NATURE I - Origins and nature of turbulence.- 4 Origins of turbulence.- 5 Nature of turbulence.- 6 Additional issues of importance related to the use of statistical methods.- PART 3: ISSUES OF PARADIGMATIC NATURE II - Specific features.- 7 The N's of turbulence.- 8 Large Reynolds number behavior, Symmetries, Universality.- 9 Intermittency and Structure(s) of and/in [...]

Fields of interest

Engineering Fluid Dynamics; Fluid- and Aerodynamics; Oceanography

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-7179-6

Hardcover

2014. XI, 169 p. 17 illus., 15 illus. in color.

\$129.00

ISBN 978-94-007-7179-6

usually dispatched within 3 to 5 business days

C.M. Ionescu, Ghent University, Gent, Belgium

The Human Respiratory System

An Analysis of the Interplay between Anatomy, Structure, Breathing and Fractal Dynamics

The Human Respiratory System combines emerging ideas from biology and mathematics to show the reader how to produce models for the development of biomedical engineering applications associated with the lungs and airways. Mathematically mature but in its infancy as far as engineering uses are concerned, fractional calculus is the basis of the methods chosen for system analysis and modelling. This reflects two decades' worth of conceptual development which is now suitable for bringing to bear in biomedical engineering. The text reveals the latest trends in modelling and identification of human respiratory parameters with a view to developing diagnosis and monitoring technologies. Of[...]

Features

The Human Respiratory System combines emerging ideas from biology and mathematics to show the reader how to produce models for the development of biomedical engineering applications associated with the lungs and airways. Mathematically mature but in its infancy as far as engineering uses are concerned, fractional calculus is the basis of the methods chosen for system analysis and modelling. This [...]

Contents

Introduction.- The Human Respiratory System.- Respiratory Impedance.- Modelling the Respiratory Tract by Means of Electrical Analogy.- Mathematical Basis for Modelling.- Modelling the Respiratory Tract by Means of Mechanical Analogy.- Frequency Domain: Parametric Model Selection.- Time Domain: Fractal Dimension.- Nonlinear Effects in Measurement of Respiratory Impedance.- Conclusion.- Appendices: Mathematical Basis of Fractional Calculus; Overview of Forced Oscillation Technique Devices.

Fields of interest

Biomedical Engineering; Physiological, Cellular and Medical Topics; Human Physiology; Pneumology/Respiratory System; Signal, Image and Speech Processing

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4471-5387-0

Hardcover

2013. XXV, 217 p. 148 illus., 129 illus. in color. (Series in BioEngineering)

\$129.00

ISBN 978-1-4471-5387-0

usually dispatched within 3 to 5 business days

Z.-B. Kuang, Shanghai Jiao Tong University, Shanghai, China (P.R.)

Theory of Electroelasticity

Theory of Electroelasticity analyzes the stress, strain, electric field and electric displacement in electroelastic structures such as sensors, actuators and other smart materials and structures. This book also describes new theories such as the physical variational principle and the inertial entropy theory. It differs from the traditional method by using the physical variational principle to derive the governing equations of the piezoelectric material, whereas the Maxwell stress is obtained automatically. By using the inertial entropy theory, the temperature wave equation is obtained very easily. The book is intended for scientists, researchers and engineers in the areas of mechanics, [...]

Features

Theory of Electroelasticity analyzes the stress, strain, electric field and electric displacement in electroelastic structures such as sensors, actuators and other smart materials and structures. This book also describes new theories such as the physical variational principle and the inertial entropy theory. It differs from the traditional method by using the physical variational principle to derive [...]

Contents

Introduction Continuum Thermodynamics.- Physical variational Principle and Governing Equations.- Generalized two dimensional electroelastic problem.- Linear inclusion and related problems.- Some problems in more complex materials with defects.- Electroelastic wave.- Three dimensional and applied electroelastic problem.- Failure theory in piezoelectric materials.

Fields of interest

Continuum Mechanics and Mechanics of Materials; Structural Materials; Mechanics; Control; Materials Science (general); Civil Engineering

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-36290-3

Distribution rights in China mainland: Shanghai Jiao Tong University Press

Hardcover

Jointly published with Shanghai Jiao Tong University Press, Shanghai

2014. IX, 431 p. 86 illus.

\$179.00

ISBN 978-3-642-36290-3

usually dispatched within 3 to 5 business days

D. Sivoletta, Aerospace Engineer, Thomson Airways, N/A, United Kingdom

To Orbit and Back Again

How the Space Shuttle Flew in Space

The Space Shuttle has been the dominant machine in the U.S. space program for thirty years and has generated a great deal of interest among space enthusiasts and engineers. This book enables readers to understand its technical systems in greater depth than they have been able to do so before. The author describes the structures and systems of the Space Shuttle, and then follows a typical mission, explaining how the structures and systems were used in the launch, orbital operations and the return to Earth. Details of how anomalous events were dealt with on individual missions are also provided, as are the recollections of those who built and flew the Shuttle. Many photographs and [...]

Features

The question may be simple, but the answer is not as easy to give. This book describes the structures and systems used each time the Shuttle was launched, and then follows an imaginary mission, explaining how those structures and systems were used in orbital operations and the return to Earth. Details of how anomalous events were dealt with on individual missions are also provided, as are the recollections [...]

Contents

Part 1: The Machine from A to Z.- Introduction.- Structure.- Main Propulsion System.- Solid Rocket Booster.- Orbital Maneuvering System and Reaction Control System.- Cargo Bay and Payload.- Electrical and Environmental Control Life Support.- Thermal Protection System.- Living On Board.- Part 2: Flying the Machine.- Ascent.- Orbital Flight.- Re-entry and Landing.

Fields of interest

Aerospace Technology and Astronautics; Popular Science in Astronomy; Extraterrestrial Physics, Space Sciences

Target groups

Popular/general

Type of publication

Popular science

More on www.springer.com/978-1-4614-0982-3

Softcover

2014. XXII, 502 p. 245 illus., 95 illus. in color. (Space Exploration)

\$44.99

ISBN 978-1-4614-0982-3

usually dispatched within 3 to 5 business days

C. Tardini, Politecnico di Milano, Milan, Italy

Toward Structural Mechanics Through Wooden Bridges in France (1716-1841)

Early applications of Navier's beam theory to the rational design of structures are documented in the Annales of the French Ecole des Ponts et Chaussées and refer to the design of three wooden bridges built in France in the 1840's. Revisiting these examples, the book provides documentation on the progressive establishment of the new design approach, based on the theory of structural mechanics rather than empirical knowledge. The bridges concerned were built according to the structural scheme patented by Ithiel Town in the USA, witnessing the diffusion in Europe of the American advancements in bridge design, circulated by the travel reports of French engineers from the Ecole. Through[...]

Features

Early applications of Navier's beam theory to the rational design of structures are documented in the Annales of the French Ecole des Ponts et Chaussées and refer to the design of three wooden bridges built in France in the 1840's. Revisiting these examples, the book provides documentation on the progressive establishment of the new design approach, based on the theory of structural mechanics rather than [...]

Contents

Tradition and innovation: the case of the 18th and 19th century wood bridges.- Theory and tests on wood elements in the French treatises of architecture and engineering in the 19th century.- The effect of the new bending theory on wood bridges building.- Conclusion.

Fields of interest

Structural Mechanics; Engineering Design; Architectural History and Theory

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-00286-6

Softcover

2014. XV, 87 p. 48 illus. (PoliMI SpringerBriefs)

\$54.99

ISBN 978-3-319-00286-6

usually dispatched within 3 to 5 business days

S. Haddadin

Towards Safe Robots

Approaching Asimov's 1st Law

The vision of seamless human-robot interaction in our everyday life that allows for tight cooperation between human and robot has not become reality yet. However, the recent increase in technology maturity finally made it possible to realize systems of high integration, advanced sensorial capabilities and enhanced power to cross this barrier and merge living spaces of humans and robot workspaces to at least a certain extent. Together with the increasing industrial effort to realize first commercial service robotics products this makes it necessary to properly address one of the most fundamental questions of Human-Robot Interaction: How to ensure safety in human-robot coexistence? In[...]

Features

The vision of seamless human-robot interaction in our everyday life that allows for tight cooperation between human and robot has not become reality yet. However, the recent increase in technology maturity finally made it possible to realize systems of high integration, advanced sensorial capabilities and enhanced power to cross this barrier and merge living spaces of humans and robot workspaces to at least [...]

Contents

State of the art.- Soft-robotics control.- Biomechanics and forensics.- Crash-testing in robotics.- Sharp and acute contact.- Reactive pre-collision strategies.- Towards the robotic co-worker.- Competitive Robotics.- Intrinsic joint compliance.- Considerations for new robot standards.- Conclusion and outlook.- Soft-robotics control.- Biomechanics and forensics.- Crash-testing in robotics.- Sharp and acute contact.- Reactive pre-collision strategies.- Towards the robotic co-worker.- Competitive Robotics.- Intrinsic joint compliance.- Considerations for new robot standards.

Fields of interest

Robotics and Automation; Artificial Intelligence (incl. Robotics); Biomedical Engineering

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-40307-1

Hardcover

2014. XXVI, 350 p. 206 illus., 171 illus. in color. (Springer Tracts in Advanced Robotics, Vol. 90)

\$129.00

ISBN 978-3-642-40307-1

usually dispatched within 3 to 5 business days

S. Xing, California State University, Los Angeles, Los Angeles, USA; S. Chen, Z. Wei, J. Xia (Eds.)

Unifying Electrical Engineering and Electronics Engineering

Proceedings of the 2012 International Conference on Electrical and Electronics Engineering

Unifying Electrical Engineering and Electronics Engineering is based on the Proceedings of the 2012 International Conference on Electrical and Electronics Engineering (ICEE 2012). This book collects the peer reviewed papers presented at the conference. The aim of the conference is to unify the two areas of Electrical and Electronics Engineering. The book examines trends and techniques in the field as well as theories and applications. The editors have chosen to include the following topics; biotechnology, power engineering, superconductivity circuits, antennas technology, system architectures and telecommunication.

Features

Unifying Electrical Engineering and Electronics Engineering is based on the Proceedings of the 2012 International Conference on Electrical and Electronics Engineering (ICEE 2012). This book collects the peer reviewed papers presented at the conference. The aim of the conference is to unify the two areas of Electrical and Electronics Engineering. The book examines trends and techniques in the field as well as [...]

Contents

Abbreviated Table of Contents: Volume 1: Advancements in Power Engineering.- Part I: Power Generation, Transmission and Distribution.- Part II: Power Generation, Transmission and Distribution.- Part III: Power System Modeling and Simulation.- Part#: Load Modeling, Forecasting and Management.- Part#: Power System Planning, Control, Protection, Maintenance and Operation.- Part#: Power System Planning, Control, Protection, Maintenance and Operation.- Part #: STATCOMS and HVDC.- Part#: Power Line Communications and Power Flow Analysis.- Part #: Reliability, Diagnostics and Prognostics.- [...]

Fields of interest

Electronics and Microelectronics, Instrumentation; Power Electronics, Electrical Machines and Networks; Electrical Engineering

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-1-4614-4980-5

Hardcover

2014. XXXIV, 2276 p. 269 illus. In 4 volumes, not available separately. (Lecture Notes in Electrical Engineering, Vol. 238)

\$529.00

ISBN 978-1-4614-4980-5

usually dispatched within 3 to 5 business days

P. Tucker, University of Cambridge, Cambridge, United Kingdom

Unsteady Computational Fluid Dynamics in Aeronautics

The field of Large Eddy Simulation (LES) and hybrids is a vibrant research area. This book runs through all the potential unsteady modelling fidelity ranges, from low-order to LES. The latter is probably the highest fidelity for practical aerospace systems modelling. Cutting edge new frontiers are defined. One example of a pressing environmental concern is noise. For the accurate prediction of this, unsteady modelling is needed. Hence computational aeroacoustics is explored. It is also emerging that there is a critical need for coupled simulations. Hence, this area is also considered and the tensions of utilizing such simulations with the already expensive LES. This work has relevance[...]

Features

The field of Large Eddy Simulation (LES) and hybrids is a vibrant research area. This book runs through all the potential unsteady modelling fidelity ranges, from low-order to LES. The latter is probably the highest fidelity for practical aerospace systems modelling. Cutting edge new frontiers are defined. One example of a pressing environmental concern is noise. For the accurate prediction of this, [...]

Contents

Preface.- 1 Introduction.- 2 Computational Methods for Unsteady Flows.- 3 Turbulence and its Modelling.- 4 Computational Aerodynamics Methods.- 5 Applications of Eddy Resolving Methods.- 6 Computational Aeroacoustics.- 7 Coupled Computational Aerodynamics.- 8 Future Outlook.- Appendix A Exemplars of Numerical Scheme Performances.- Appendix B RANS Models.- Index.

Fields of interest

Engineering Fluid Dynamics; Aerospace Technology and Astronautics; Computational Science and Engineering

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-7048-5

Hardcover

2014. XXV, 413 p. 208 illus., 94 illus. in color. (Fluid Mechanics and Its Applications, Vol. 104)

\$179.00

ISBN 978-94-007-7048-5

usually dispatched within 3 to 5 business days

M. Mihelj, University of Ljubljana, Ljubljana, Slovenia; D. Novak, University of Ljubljana, Ljubljana, Slovenia; S. Beguš, University of Ljubljana, Ljubljana, Slovenia

Virtual Reality Technology and Applications

As virtual reality expands from the imaginary worlds of science fiction and pervades every corner of everyday life, it is becoming increasingly important for students and professionals alike to understand the diverse aspects of this technology. This book aims to provide a comprehensive guide to the theoretical and practical elements of virtual reality, from the mathematical and technological foundations of virtual worlds to the human factors and the applications that enrich our lives: in the fields of medicine, entertainment, education and others. After providing a brief introduction to the topic, the book describes the kinematic and dynamic mathematical models of virtual worlds. It[...]

Features

As virtual reality expands from the imaginary worlds of science fiction and pervades every corner of everyday life, it is becoming increasingly important for students and professionals alike to understand the diverse aspects of this technology. This book aims to provide a comprehensive guide to the theoretical and practical elements of virtual reality, from the mathematical and technological foundations of [...]

Contents

Preface.- Introduction to virtual reality.- 2 Degrees of freedom, pose, displacement and perspective.- 3 Dynamic model of a virtual environment.- 4 Tracking the user and environment.- 5 Visual modality in virtual reality.- 6 Acoustic Modality in Virtual Reality.- 7 Haptic modality in virtual reality.- 8 Augmented reality.- 9 Interaction with a virtual environment.- 10 Design of a multimodal virtual environment.- Index.

Fields of interest

Engineering Design; Computer Imaging, Vision, Pattern Recognition and Graphics; Information Systems Applications (incl.Internet); Electrical Engineering

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-94-007-6909-0

Hardcover

2014. X, 231 p. 169 illus., 35 illus. in color. (Intelligent Systems, Control and Automation: Science and Engineering, Vol. 68)

\$129.00

ISBN 978-94-007-6909-0

usually dispatched within 3 to 5 business days

Environment

A. Moura Bernardes, Universidade Federal do Rio, Porto Alegre, Brazil; M.A. Siqueira Rodrigues, Universidade FEEVALE, Novo Hamburgo, Brazil; J. Zoppas Ferreira, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil (Eds.)

Electrodialysis and Water Reuse

Novel Approaches

This book presents novel techniques to evaluate electrodialysis processes, to synthesize ionic membranes and to characterize their properties. It shows the potential use of membrane process to the treatment of effluents generated in many industrial sectors such as refineries, leather industries, mining and electroplating processes. The book is based on the results obtained by the author's research group during the past decade. It is useful for students, researchers and engineers interested in membrane technologies for water reuse.

Features

This book presents novel techniques to evaluate electrodialysis processes, to synthesize ionic membranes and to characterize their properties. It shows the potential use of membrane process to the treatment of effluents generated in many industrial sectors such as refineries, leather industries, mining and electroplating processes. The book is based on the results obtained by the author's research group during [...]

Contents

Introduction.- General Aspects of Membrane Separation Processes.- Electrodialysis.- Control Parameters in Electrodialysis.- Ionic Membranes.- Electrodialysis in Water Treatment.- Electrodialysis Treatment of Refinery Wastewater.- Electrodialysis Treatment of Tannery Wastewater.- Electrodialysis Treatment of Mining Acid Drainage.- Electrodialysis to the Recovery of Hexavalent Chromium Solutions.- Trivalent Chromium Transport Through Ionic Membranes.- Electrodialysis Treatment of Phosphate Solutions.- Electrodialysis Treatment of Zinc Wastewater.- Electrodialysis Treatment of Cadmium[...]

Fields of interest

Waste Management / Waste Technology; Operating Procedures, Materials Treatment; Analytical Chemistry

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-40248-7

Hardcover

2014. X, 144 p. 25 illus., 6 illus. in color. (Topics in Mining, Metallurgy and Materials Engineering)

\$129.00

ISBN 978-3-642-40248-7

usually dispatched within 3 to 5 business days

P. Golinska (Ed.)

Environmental Issues in Automotive Industry

The automotive industry is one of the most environmental aware manufacturing sectors. Product take-back regulations influence design of the vehicles, production technologies but also the configuration of automotive reverse supply chains. The business practice comes every year closer to the closed loop supply chain concept which completely reuses, remanufactures and recycles all materials. The book covers the emerging environmental issues in automotive industry through the whole product life cycle. Its focus is placed on a multidisciplinary approach. It presents viewpoints of academic and industry personnel on the challenges for implementation of sustainable policies in the automotive sector

Features

The automotive industry is one of the most environmental aware manufacturing sectors. Product take-back regulations influence design of the vehicles, production technologies but also the configuration of automotive reverse supply chains. The business practice comes every year closer to the closed loop supply chain concept which completely reuses, remanufactures and recycles all materials. The book covers the [...]

Contents

Sustainability in automotive industry.- Environmental friendly practices in the automotive industry.- A declarative approach to new product development in the automotive industry.- What is influencing the sustainable attitude of the automobile industry.- Sustainability Issues for Vehicles and Fleet Vehicles Using Hybrid and Assistive Technologies.- Tools and methods for greener decision making.- Diagnostics systems as a tool to reduce and monitor gas emissions from combustion engines.- Reachability of multimodal processes cyclic steady states space.- Decision support in automotive [...]

Fields of interest

Environmental Engineering / Biotechnology; Sustainable Development; Production / Logistics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-23836-9

Hardcover

2014. VIII, 259 p. 97 illus., 51 illus. in color. (EcoProduction)

\$179.00

ISBN 978-3-642-23836-9

usually dispatched within 3 to 5 business days

D. Ramirez, Texas A&M University - Kingsville, Kingsville, USA; J. Ren, Texas A&M University-Kingsville, Kingsville, USA; K.D. Jones, Texas A&M University-Kingsville, Kingsville, USA; H. Lamm, Texas A&M Engineering Experiment Station, College Station, USA (Eds.)

Environmental Sustainability Issues in the South Texas–Mexico Border Region

Environmental sustainability issues in a fragile, semi-arid region and its coastal area, which experience climate changes from extreme drought conditions to the effects of hurricanes over a period of weeks to years, provide specific challenges for the ecosystems and the populations existing within the region.

The research presented focuses on the problems and some solutions specific to the South Texas–Mexico border region, on both sides of the Rio Grande, focusing on water and air pollution.

Features

This book highlights the environmental sustainability problems specific to the South Texas–Mexico border region, on both sides of the Rio Grande, focusing on water and air pollution. The region is beset by climate extremes, from severe drought conditions to hurricanes, providing specific challenges for the ecosystems and the populations existing within the region. The water pollution research [...]

Contents

From the contents: Introduction to Environmental Sustainability Issues in the South Texas–Mexico Border Region.- Pollution and Lifestyle Causes of Asthma and Allergies among School Children of Tamaulipas, Mexico in the U.S.-Mexico Border Region.- Environmental Health Indicators for the Border Region between South Texas and Northeastern Mexico.- Characterization of Ultrafine Particles and Other Vehicular Pollutants near an International Bridge in United States - Mexico Border Region.- Evaluating the Impacts of Emissions and Global Temperature Perturbations on Air Quality in South and [...]

Fields of interest

Sustainable Development; Atmospheric Protection / Air Quality Control / Air Pollution; Environmental Health; Monitoring / Environmental Analysis; Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution

Target groups

Graduate

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7121-5

Hardcover

2014. XI, 198 p. 90 illus., 60 illus. in color.

\$129.00

ISBN 978-94-007-7121-5

usually dispatched within 3 to 5 business days

V. Shukla, Babasaheb Bhimrao Ambedkar University, Lucknow, India; U. D.K., National Botanical Research Institute, Lucknow, India; R. Bajpai, National Botanical Research Institute, Lucknow, India

Lichens to Biomonitor the Environment

The book embodies the detailed account about unique symbionts i.e. LICHENS in ecosystem monitoring. The first chapter deals with unique characteristics features of lichens which facilitate their survival in extreme climates and makes them an ideal organism for ecosystem monitoring. Biosynthesis of secondary metabolites are known to protect lichens against increasing environmental stresses therefore second chapter provides insight into various chromatographic and modern spectroscopic techniques involved in separation and characterization of lichen substances. The third chapter elaborates the criteria for selection of biomonitoring species and characters of host plant that influences [...]

Features

The book embodies the detailed account about unique symbionts i.e. LICHENS in ecosystem monitoring. The first chapter deals with unique characteristics features of lichens which facilitate their survival in extreme climates and makes them an ideal organism for ecosystem monitoring. Biosynthesis of secondary metabolites are known to protect lichens against increasing environmental stresses therefore second [...]

Contents

1. Introduction.- 2. Secondary metabolites and its isolation & characterization.- 3. Selection of biomonitoring species.- 4. Tolerant lichens in different lichenogeographical regions of India.- 5. Ecosystem monitoring.- 6. Management and conservation approaches.- References.- 7. Glossary.

Fields of interest

Monitoring / Environmental Analysis; Pollution; Ecology; Plant Sciences; Atmospheric Protection / Air Quality Control / Air Pollution

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-81-322-1502-8

Hardcover

2014. X, 185 p. 40 illus., 32 illus. in color.

\$129.00

ISBN 978-81-322-1502-8

usually dispatched within 3 to 5 business days

A. Pariatamby, University of Malaya, Kuala Lumpur, Malaysia; M. Tanaka, Tottori Univ. of Environmental Studies, Tottori, Japan (Eds.)

Municipal Solid Waste Management in Asia and the Pacific Islands

Challenges and Strategic Solutions

Solid waste management issues, technologies and challenges are dynamic. More so, in developing and transitory nations in Asia. This book, written by Asian experts in solid waste management, explores the current situation in Asian countries including Pacific Islands. There are not many technical books of this kind, especially dedicated to this region of the world. The chapters form a comprehensive, coherent investigation in municipal solid waste (MSW) management, including, definitions used, generation, sustainable waste management system, legal framework and impacts on global warming. Several case studies from Asian nations are included to exemplify the real situation experienced.[...]

Features

Solid waste management issues, technologies and challenges are dynamic. More so, in developing and transitory nations in Asia. This book, written by Asian experts in solid waste management, explores the current situation in Asian countries including Pacific Islands. There are not many technical books of this kind, especially dedicated to this region of the world. The chapters form a comprehensive, coherent [...]

Contents

Sustainable Society and Municipal Solid Waste Management.- Sustainable 3R Practice in the Asia and Pacific Regions: The Challenges and Issues.- Formalization of Informal Recycling in Low-Income Countries.- 3R (Reduce, Reuse and Recycle) in Bangladesh.- Municipal Solid Waste Management in Cambodia.- Municipal Solid Waste Management in China.- Municipal Solid Waste Management in India.- Municipal Solid Waste Management in Indonesia.- Municipal Solid Waste Management in Japan.- Management of Municipal Solid Waste (MSW) in Korea.- MSW Management in Malaysia: Changes for Sustainability.- [...]

Fields of interest

Waste Management / Waste Technology; Environmental Engineering / Biotechnology; Environmental Management; Sustainable Development; Pollution

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-981-4451-72-7

Hardcover

2014. XI, 377 p. 95 illus., 72 illus. in color. (Environmental Science)

\$179.00

ISBN 978-981-4451-72-7

usually dispatched within 3 to 5 business days

D.D. Reible, University of Texas at Austin, Austin, USA (Ed.)

Processes, Assessment and Remediation of Contaminated Sediments

The purpose of this book is to help engineers and scientists better understand contaminated sediment sites and identify and design remedial approaches that are more efficient and effective. Contaminated sediment management is a difficult and costly exercise that is rarely addressed with easily identified and implemented remedies. It is hoped that this book can help identify and implement management approaches that provide an optimal, if not entirely satisfactory, solution to sediment contaminant problems.

Features

The purpose of this volume, Processes, Assessment and Remediation of Contaminated Sediment, is to help engineers and scientists better understand contaminated sediment sites and identify and design remedial approaches that are more efficient and effective. Contaminated sediment management is a difficult and costly exercise that is rarely addressed with easily identified and implemented remedies. It [...]

Contents

Introduction.- Sediment and Contaminant Processes.- Fundamentals of Sediment Transport.- The Mechanics of Soft Cohesive Sediments During Early Diagenesis.- Advances in Risk Assessment in Support of Sediment Risk Management.- Assessing Biological Effects.- Assessing Bioavailability of Hydrophobic Organic Compounds (HOCs) and Heavy Metals in Sediments Using Freely Available Pore Water Concentrations.- Risk Management for Contaminated Sediments.- Monitored Natural Recovery.- In Situ Biotransformation of Contaminants in Sediments.- In Situ Treatment for Control of Hydrophobic Organic[...]

Fields of interest

Environmental Engineering / Biotechnology; Environmental Management; Soil Science & Conservation

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-6725-0

Hardcover

2014. XL, 462 p. 104 illus., 54 illus. in color. (SERDP ESTCP Environmental Remediation Technology, Vol. 6)

\$89.99

ISBN 978-1-4614-6725-0

Online orders shipping within 2-3 days.

A. Tsunekawa, Tottori University, Tottori, Japan; G. Liu, Chinese Academy of Sciences and, Yangling, China (P.R.); N. Yamanaka, Tottori University, Tottori, Japan; S. Du, Chinese Academy of Sciences and, Yangling, China (P.R.) (Eds.)

Restoration and Development of the Degraded Loess Plateau, China

This book presents state-of-the-art scientific evidence and technological innovations to restore lands on the Loess Plateau of China, known worldwide for its serious land degradation and desertification problems. Supported by a rapidly developing Chinese economy and the dissemination of effective technology, the Grain-for-Green Project and Western Development Action launched by the Chinese government have resulted in successful ecological restoration and protection over the past 30 years. These programs have contributed not only to conservation of soil and water, but also to economic development. At the same time, however, these developmental interventions have brought new challenges[...]

Features

This book presents state-of-the-art scientific evidence and technological innovations to restore lands on the Loess Plateau of China, known worldwide for its serious land degradation and desertification problems. Supported by a rapidly developing Chinese economy and the dissemination of effective technology, the Grain-for-Green Project and Western Development Action launched by the Chinese government have [...]

Fields of interest

Environmental Management; Soil Science & Conservation; Nature Conservation; Environment (general)

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-4-431-54480-7

Hardcover

2014. XVIII, 288 p. 103 illus., 52 illus. in color. (Ecological Research Monographs)

\$129.00

ISBN 978-4-431-54480-7

usually dispatched within 3 to 5 business days

J. Brils, Deltare, Utrecht, Netherlands; W. Brack, UFZ Helmholtz Centre, Leipzig, Germany; D. Müller-Grabherr, Umweltbundesamt GmbH, Wien, Austria; P. Négrel, Bureau de Recherches Géologiques et Mini, Orléans cedex 2, France; J.E. Vermaat, Free University Amsterdam, Amsterdam, Netherlands (Eds.)

Risk-Informed Management of European River Basins

The growing impacts of economic activities and climate change on the conditions of rivers throughout the world, require a new, integrated approach towards river basin management, an approach that can also cope with an uncertain future. In this volume, leading European scientists and representatives of major stakeholder groups present risk-informed management as this new approach, as developed in the European Commission-funded project RISK-BASE. It aims to improve the ecological quality of river basins and thus to sustain the goods and services they provide for the benefit of society. Risk-informed management involves the integrated application of three key-principles: Being well[...]

Features

The growing impacts of economic activities and climate change on the conditions of rivers throughout the world, require a new, integrated approach towards river basin management, an approach that can also cope with an uncertain future. In this volume, leading European scientists and representatives of major stakeholder groups present risk-informed management as this new approach, as developed in the [...]

Contents

Introduction: the Need for Risk-Informed River Basin Management.- Soil – Sediment – River Connections: Catchment Processes delivering Pressures to River Catchments.- Status and Causal Pathway Assessments Supporting River Basin Management.- Monitoring Programs, Multiple Stress Analysis and Decision Support for River Basin Management.- Downscaling Scenarios as an Exploratory Tool for River Basin Management – an Introduction.- Informing River Basin Management on Flood and Drought Risks Taking Future Uncertainties into Account.- Future Land Use Patterns in European River Basins: Scenario[...]

Fields of interest

Environmental Management; Water Policy/Water Governance/Water Management; Hydrogeology; Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution; Marine & Freshwater Sciences; Monitoring / Environmental Analysis

Target groups

Research

Type of publication

Reviews

More on www.springer.com/978-3-642-38597-1

Hardcover

2014. XIV, 395 p. 63 illus., 47 illus. in color. (The Handbook of Environmental Chemistry, Vol. 29)

\$349.00

ISBN 978-3-642-38597-1

usually dispatched within 3 to 5 business days

S. Amin, Directeur Forum du Tiers Monde, Paris, France

Samir Amin

Pioneer of the Rise of the South

These texts by Samir Amin have been selected for the purpose of encouraging readers to learn more about his work to trace the historical trajectory of capitalism, which has consistently produced polarization at the global level. Thus the dominated peripheries cannot hope to catch up with the social organization prevailing in the dominant centres and the impossibility of global capitalism becoming stabilized in its peripheries has resulted in the long decline of capitalism, coinciding with successive waves of active involvement by the peoples of the South to shape a new world, potentially embarking on the long journey to socialism. Amin presents this major conflict of the 20th[...]

Features

These texts by Samir Amin have been selected for the purpose of encouraging readers to learn more about his work to trace the historical trajectory of capitalism, which has consistently produced polarization at the global level. Thus the dominated peripheries cannot hope to catch up with the social organization prevailing in the dominant centres and the impossibility of global capitalism becoming [...]

Contents

Biographical Notes.- Bibliography.- Theoretical Model of Capital Accumulation and Development in the Contemporary World.- Unity and Change in the Ideology of Political Economy.- Is Social History Marked by Overdetermination or Underdetermination?.- Multipolarity in the 20th Century.- The Center Will Not Hold: The Rise and Decline of Liberalism.- The Countries of the South Must Take Their Own Independent Initiatives.- The Democratic Fraud and the Universalist Alternative.- Land Reforms: Desirable Land Tenure Reforms in Africa and Asia.- Transnational Capitalism.- Africa 50 years of[...]

Fields of interest

Environmental Law / Policy / Ecojustice; History of Science; International Relations

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-01115-8

Softcover

2014. XVIII, 161 p. 12 illus. in color. (SpringerBriefs on Pioneers in Science and Practice, Vol. 16)

\$49.99

ISBN 978-3-319-01115-8

usually dispatched within 3 to 5 business days

S. Kapur, S. Erşahin, Çankırı Karatekin University, Çankırı, Turkey (Eds.)

Soil Security for Ecosystem Management

Mediterranean Soil Ecosystems 1

The term "Soil Security" is used in the context of maintaining the quality and quantity of soil needed in order to ensure continuous supplies of food and fresh water for our society. Topics in this unique book on the management of soil sustainability in the Mediterranean region include: soil information, land degradation, land desertification, pedoenvironments, and the carbon cycle and sequestration. One main focus of the book is the description of new approaches that have been adapted with regards to interdisciplinary soil ecosystem management to combat and mitigate desertification. The contributing authors are renowned experts in their fields which cover the subjects on traditional[...]

Features

The term "Soil Security" is used in the context of maintaining the quality and quantity of soil needed in order to ensure continuous supplies of food and fresh water for our society. Topics in this unique book on the management of soil sustainability in the Mediterranean region include: soil information, land degradation, land desertification, pedoenvironments, and the carbon cycle and sequestration. One main [...]

Contents

Managing Terrestrial Carbon in a Changing Climate.- Land Degradation and Security Linkages in the Mediterranean Region.- Role of soil information in Land Degradation and Desertification mapping.- Pedoenvironments of the Mediterranean countries. Resources and threats.- Carbon Cycle and Sequestration in Terrestrial Ecosystems with Specific Reference to Mediterranean and Boreal Regions.- Soil and Terroir.- Polygenic red calcic soils in coastal Middle Palaeolithic environments, Israel: taxonomy and pedosedimentary reconstructions.

Fields of interest

Environmental Law / Policy / Ecojustice; Environmental Management; Soil Science & Conservation

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-00698-7

Softcover

2014. XII, 167 p. 57 illus., 37 illus. in color. (Mediterranean Studies, Vol. 8)

\$49.99

ISBN 978-3-319-00698-7

usually dispatched within 3 to 5 business days

F. Liu, China University of Geosciences, Beijing, China (P.R.); G. Huang, Beijing Academy of Food Sciences, Beijing, China (P.R.); H. Fallowfield, Flinders University, Adelaide, Australia; H. Guan, Flinders University, Adelaide, Australia; L. Zhu, Geological Publishing House, Beijing, China (P.R.); H. Hu, Hydrogeology & Eng. Geology Prospecting, Harbin, China (P.R.)

Study on Heterotrophic-Autotrophic Denitrification Permeable Reactive Barriers (HAD PRBs) for In Situ Groundwater Remediation

"Study on Heterotrophic-Autotrophic Denitrification Permeable Reactive Barriers (HAD PRBs) for In Situ Groundwater Remediation" is an unmatched reference work on PRBs for groundwater in situ remediation. It proposes a novel HAD PRB approach for nitrate-contaminated groundwater remediation, and provides a systematic and clear explanation of design concepts and denitrification mechanisms. The book consists of four chapters, each of which covers key aspects of HAD PRBs. It provides rich, easy-to-follow illustrations, tables and references. Unique as a comprehensive reference work on the subject, it will serve as a valuable resource for all engineers and scientists active in environmental[...]

Features

"Study on Heterotrophic-Autotrophic Denitrification Permeable Reactive Barriers (HAD PRBs) for In Situ Groundwater Remediation" is an unmatched reference work on PRBs for groundwater in situ remediation. It proposes a novel HAD PRB approach for nitrate-contaminated groundwater remediation, and provides a systematic and clear explanation of design concepts and denitrification mechanisms. The book consists of [...]

Contents

General introduction.- Heterotrophic-autotrophic denitrification (HAD) for groundwater remediation in an aerobic environment.- Heterotrophic-autotrophic denitrification permeable reactive barriers (HAD PRBs) for groundwater remediation.- Identification of bacterial diversity in the inoculums.

Fields of interest

Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution; Environmental Engineering / Biotechnology; Environmental Science and Engineering; Hydrogeology

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-642-38153-9

Softcover

2014. IX, 105 p. 38 illus., 2 illus. in color. (SpringerBriefs in Water Science and Technology)

\$54.99

ISBN 978-3-642-38153-9

usually dispatched within 3 to 5 business days

J. Gonzalez-Feliu, F. Semet, J.-L. Routhier (Eds.)

Sustainable Urban Logistics: Concepts, Methods and Information Systems

Since the 1990's, researchers, practitioners and public administrations have given more thought to urban logistics. However, their interests and goals are not the same, and several approaches do not produce efficient logistics systems as a result. This book aims to provide both a conceptual framework for urban logistics planning and management and to create a basis for deploying solutions that aim to reduce the main nuisances related to urban goods. The proposed book is divided in two parts. The first proposes a set of methodological chapters, written by key authors, which aim to support decision makers in their current choices related to urban logistics. In addition to public[...]

Features

Since the 1990's, researchers, practitioners and public administrations have given more thought to urban logistics. However, their interests and goals are not the same, and several approaches do not produce efficient logistics systems as a result. This book aims to provide both a conceptual framework for urban logistics planning and management and to create a basis for deploying solutions that aim to reduce [...]

Contents

Urban logistics in the XXIst century: stakes issues and future trends.- The urban flows in sustainable supply chain management.- Understanding and diagnosis of urban goods movement.- Planning sustainable urban logistics systems: an Information Systems Theory approach.- Methods for planning in urban transport systems with crossdocking.- The evaluation of urban logistics projects and experimentations.- Scenario assessment and demand forecasting in urban freight transport planning.- How local authorities can include freight in their transport planning process.- Impacts of time constraints[...]

Fields of interest

Environmental Engineering / Biotechnology; Sustainable Development; Production / Logistics; Energy (general)

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-31787-3

Hardcover

2014. XII, 265 p. 47 illus., 34 illus. in color. (EcoProduction)

\$179.00

ISBN 978-3-642-31787-3

usually dispatched within 3 to 5 business days

R. Roggema, Swinburne University of Technology, Hawthorn, Australia

Swarm Planning

The Development of a Planning Methodology to Deal with Climate Adaptation

This book shows that the problem of climate adaptation, which is described in social planning terms as 'wicked,' is at odds with the contemporary practice of spatial planning. The author proposes a new adjusted framework which is more adaptable to unpredictable, wicked, dynamic and non-linear processes. The inspiration for this new method is the behaviour of swarms: bees, ants, birds and fish are capable of self-organization, which enables the system to become less vulnerable to sudden environmental changes. The framework proposed in Swarm Planning consists of these four elements: Two levels of complexity, the first being the whole system and the second its individual components. Each[...]

Features

This book shows that the problem of climate adaptation, which is described in social planning terms as 'wicked,' is at odds with the contemporary practice of spatial planning. The author proposes a new adjusted framework which is more adaptable to unpredictable, wicked, dynamic and non-linear processes. The inspiration for this new method is the behaviour of swarms: bees, ants, birds and fish are capable of [...]

Contents

Summary.- Introduction.- Chapter One: Introduction, Methodology, Limitations.- Chapter Two: Towards a Spatial Planning Framework for Climate Adaptation.- Chapter Three: Developing a Planning Theory for Wicked Problems: Swarm Planning.- Chapter Four: Incremental Change, Transition or Transformation? Optimising Change Pathways for Climate Adaptation in Spatial Planning.- Chapter Five: The Use of Spatial Planning to Increase the Resilience for Future Turbulence in the Spatial System of the Groningen Region to Deal with Climate Change.- Chapter Six: Swarming Landscapes, New Pathways for[...]

Fields of interest

Climate Change; Sustainable Development; Landscape Architecture; Cities, Countries, Regions; Landscape, Regional and Urban Planning; Science

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-7151-2

Hardcover

2014. XXIX, 286 p. 130 illus., 100 illus. in color. (Springer Theses)

\$129.00

ISBN 978-94-007-7151-2

usually dispatched within 3 to 5 business days

R. Roggema, Swinburne University of Technology, Hawthorn, Australia (Ed.)

The Design Charrette

Ways to Envision Sustainable Futures

This book was written to support community involvement in the design process, to help prevent negative outcomes that can result from a top-down design approach. The combination of community involvement and design is, at least in literature, not very extensive. Although much has been written about stakeholder involvement, this is often not directly related to design processes, which – most importantly – deprives community members of the opportunity to design their desired future themselves. The Design Charrette: Ways to Envision Sustainable Futures provides a theoretical foundation establishing the benefits of organizing a design charrette for community-based planning, supported by[...]

Features

This book was written to support community involvement in the design process, to help prevent negative outcomes that can result from a top-down design approach. The combination of community involvement and design is, at least in literature, not very extensive. Although much has been written about stakeholder involvement, this is often not directly related to design processes, which – most importantly – [...]

Contents

Chapter 1: That stubborn Mr. Vedder.- Part I: GENERAL THEORY.- Chapter 2: The Design Charrette.- Chapter 3: Innovations in Organisational and Community Learning.- Chapter 4: Shifting Paradigms.- Part II: EXAMPLES AND CASE STUDIES.- Chapter 5: International Conference on Renewable Energy Approaches for the Spatial Environment (INCREASE).- Chapter 6: Charrettes in Two Days: Sea Lake and Bendigo.- Chapter 7: Lok Jumbish: Rural Participatory Design in Rajasthan, Lessons for the Future.- Chapter 8: Groningen; the Spread-out Charrette.- Chapter 9: Grounds for Change, Sustainable Energy[...]

Fields of interest

Sustainable Development; Cities, Countries, Regions; Climate Change Impacts; Business Strategy/Leadership; Landscape Architecture; Urbanism

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7030-0

Hardcover

2014. XXV, 335 p. 223 illus., 220 illus. in color.

\$129.00

ISBN 978-94-007-7030-0

usually dispatched within 3 to 5 business days

S. Goffredo, Z. Dubinsky, Bar Ilan University, Ramat Gan, Israel (Eds.)

The Mediterranean Sea

Its history and present challenges

This volume is an indispensable addition to the multidisciplinary coverage of the science of the Mediterranean Sea. The editors have gathered leading authorities from the fields of Marine Biology, Ecology, paleoclimatology, Chemical and Physical Oceanography, Zoology, Botany, Aquatic Photosynthesis, Socioeconomics, Mariculture, Mediterranean History and Science of Humanity. Beginning with the birth of the Mediterranean Sea and its myths. From coral to fish, an introduction is given to its major inhabitants of plants and animals past and present. The chapters illustrate how organisms interact as part of the structure and function of the Sea's main ecosystems. The rise of the[...]

Features

This volume is an indispensable addition to the multidisciplinary coverage of the science of the Mediterranean Sea. The editors have gathered leading authorities from the fields of Marine Biology, Ecology, paleoclimatology, Chemical and Physical Oceanography, Zoology, Botany, Aquatic Photosynthesis, Socioeconomics, Mariculture, Mediterranean History and Science of Humanity. Beginning [...]

Contents

Part I: Geology, chemical and physical oceanography.- Part II: Ecology: Taxa and Trophic Levels.- Part III: Global Climate Change and Ecosystem Effects.- Part IV: Mediterranean Man and Sea: Myths, origins, challenges and opportunities.

Fields of interest

Marine & Freshwater Sciences; Freshwater & Marine Ecology; Microbial Ecology; Plant Ecology; Environmental Economics

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-6703-4

Hardcover

2014. XV, 678 p. 237 illus., 169 illus. in color.

\$179.00

ISBN 978-94-007-6703-4

usually dispatched within 3 to 5 business days

Geography

P.E. Clark, C. Clark

Constant-Scale Natural Boundary Mapping to Reveal Global and Cosmic Processes

Whereas conventional maps can be expressed as outward-expanding formulae with well-defined central features and relatively poorly defined edges, Constant Scale Natural Boundary (CSNB) maps have well-defined boundaries that result from natural processes and thus allow spatial and dynamic relationships to be observed in a new way useful to understanding these processes. CSNB mapping presents a new approach to visualization that produces maps markedly different from those produced by conventional cartographic methods. In this approach, any body can be represented by a 3D coordinate system. For a regular body, with its surface relatively smooth on the scale of its size, locations of[...]

Features

Whereas conventional maps can be expressed as outward-expanding formulae with well-defined central features and relatively poorly defined edges, Constant Scale Natural Boundary (CSNB) maps have well-defined boundaries that result from natural processes and thus allow spatial and dynamic relationships to be observed in a new way useful to understanding these processes. CSNB mapping presents a new approach to [...]

Contents

Chapter One: Constant-Scale Natural Boundary Mapping in Context.- Chapter Two: CSNB Mapping Technique.- Chapter Three: Interpretation of CSNB Maps.- Chapter Four: Mapping the Earth.- Chapter Five: CSNB Mapping Applied to Other Regular Bodies.- Chapter Six: CSNB Mapping Applied to Irregular Bodies.- Chapter Seven: Mapping the Sky.- Chapter Eight: The Future of CSNB Mapping.

Fields of interest

Geographical Information Systems / Cartography; Planetology; Astronomy, Observations and Techniques

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-7761-7

Softcover

2013. X, 116 p. 53 illus., 30 illus. in color. (SpringerBriefs in Astronomy)

\$49.99

ISBN 978-1-4614-7761-7

usually dispatched within 3 to 5 business days

A.K. Biswas, C. Tortajada, Third World Centre for Water Management, Atizapán, Mexico; A. Biswas-Tortajada, Third World Centre for Water Management, Atizapán, Mexico; Y.K. Joshi, A. Gupta

Creating Shared Value

Impacts of Nestlé in Moga, India

Nestlé's Moga factory was set up in 1961 and comprises of the primary milk collection area for Nestlé's operations. Since its inception in Moga, Nestlé has been working with its milk farmers and ancillary suppliers towards improving quality and productivity. The study presented in this book (carried out by the Third World Centre for Water Management, Mexico) highlights Nestlé's way of doing business through its philosophy of Creating Shared Value (CSV) and how it contributed to the development of the region over the past 50 years through direct and indirect employment, steady income for milk and other suppliers, and technology transfer. The main objective of the study is to learn to [...]

Features

Nestlé's Moga factory was set up in 1961 and comprises of the primary milk collection area for Nestlé's operations. Since its inception in Moga, Nestlé has been working with its milk farmers and ancillary suppliers towards improving quality and productivity. The study presented in this book (carried out by the Third World Centre for Water Management, Mexico) highlights Nestlé's way of doing business through [...]

Contents

Executive Summary.- Introduction.- Moga factory: The beginning.- India's revolutions: Seizing local potential and harnessing.- Milk production.- The Key to Success: Agricultural Extension Services.- Contributions to the local economy.- A test to the Moga community of interests.- Evolution of the dairy industry in Moga.- Moga as a catalyst for development.- Sharing the future: Concluding thoughts.

Fields of interest

Economic Geography; Non-Profit Enterprises/Corporate Social Responsibility; Sustainable Development

Target groups

Professional/practitioner

Type of publication

Brief

More on www.springer.com/978-3-319-01462-3

Softcover

2014. XIII, 115 p. 13 illus., 2 illus. in color. (SpringerBriefs on Case Studies of Sustainable Development)

\$54.99

ISBN 978-3-319-01462-3

usually dispatched within 3 to 5 business days

A. Dewan, Curtin University, Bentley, Australia; R. Corner, Curtin University, Bentley, Australia (Eds.)

Dhaka Megacity

Geospatial Perspectives on Urbanisation, Environment and Health

The book Dhaka Megacity: Geospatial Perspectives on Urbanisation, Environment and Health presents the use of geospatial techniques to address a number of environmental issues, including land use change, climatic variability, urban sprawl, population density modelling, flooding, environmental health, water quality, energy resources, urban growth modelling, infectious diseases and the quality of life. Although the work is focused on the Megacity of Dhaka in Bangladesh, the techniques and methods that are used to research these issues can be utilized in any other areas where rapid population growth coupled with unplanned urbanization is leading to environmental degradation. The book is [...]

Features

The book Dhaka Megacity: Geospatial Perspectives on Urbanisation, Environment and Health presents the use of geospatial techniques to address a number of environmental issues, including land use change, climatic variability, urban sprawl, population density modelling, flooding, environmental health, water quality, energy resources, urban growth modelling, infectious diseases and the quality of life. [...]

Contents

Introduction.- From a Town to a Megacity: 400 Years of Growth.- Spatiotemporal Patterns of Population Distribution.- Climatic Variability.- Monitoring and Prediction of Land-Use and Land-Cover (LULC) Change.- Spatiotemporal Analysis of Urban Growth, Sprawl and Structure.- Key Driving Factors Influencing Urban Growth: Spatial-Statistical Modelling with CLUE-s.- Analysis of Urban Development Suitability.- Impact of Land Use Change on Flooding Patterns.- Flood Vulnerability and Risk Assessment with Spatial Multi-Criteria Evaluation.- Supplementing Electrical Power through Solar PV [...]

Fields of interest

Geographical Information Systems / Cartography; Environmental Management; Epidemiology; Quality of Life Research

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-6734-8

Hardcover

2014. XXVII, 405 p. 98 illus., 56 illus. in color. (Springer Geography)

\$129.00

ISBN 978-94-007-6734-8

usually dispatched within 3 to 5 business days

E. Liebenberg, University of South Africa, Pretoria, South Africa; P. Collier, University of Portsmouth, Portsmouth, United Kingdom; Z.G. Torok (Eds.)

History of Cartography

International Symposium of the ICA, 2012

This volume collects 22 papers presented at the 4th International Symposium of the ICA Commission on the History of Cartography, held at Eotvos Lorand University, Budapest, Hungary, on 28-29 June 2012. The overall conference theme is 'Exploration - Discovery - Cartography', but preference has been given to papers dealing with cartography in the 19th and 20th centuries. The papers are classified according to regional sub-themes, i.e. papers on the Americas, papers on Africa, etc.

Features

This volume collects 22 papers presented at the 4th International Symposium of the ICA Commission on the History of Cartography, held at Eötvös Loránd University, Budapest, Hungary, on 28-29 June 2012. The overall conference theme is 'Exploration - Discovery - Cartography', but preference has been given to papers dealing with cartography in the 19th and 20th centuries. The papers are classified according to [...]

Contents

Redefining Imperial Borders: Marking the Eastern Border of the Habsburg Monarchy in the Second Half of the Eighteenth Century.- Exploring and mapping the Danube: Reading a hydrographical map of Buda and Pest (1833).- Saxony's role in the measurement of the Central European Meridian Arc as an international geodetic project since 1862.- Media-related Aspects of Popularization: The Geographical Serials from the Publishing Houses of Friedrich Justin Bertuch.- Exploring along the Rome Meridian - Roger Bosovich and the First Modern Map of the Papal States.- The Mineral Maps of L. F. [...]

Fields of interest

Geographical Information Systems / Cartography

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-33316-3

Hardcover

2014. IX, 336 p. 145 illus., 25 illus. in color. (Publications of the International Cartographic Association (ICA))

\$179.00

ISBN 978-3-642-33316-3

usually dispatched within 3 to 5 business days

U. Altrock, University of Kassel, Kassel, Germany; S. Schoon, University of Kassel, Kassel, Germany (Eds.)

Maturing Megacities

The Pearl River Delta in Progressive Transformation

This edited volume covers the multiple changes concerning urban governance in the course of the progressive transformation of the Pearl River Delta mega-urban region in China. Looking at the megacities Guangzhou and Shenzhen, it analyzes the maturing of socio-economic, political and spatial structures after the first waves of economic globalization, political transformation, and their rapid expansion and urbanization. The initial claim and starting point of the book is the existence of a profound multidimensional shift in the coastal mega-urban region with a major tendency towards urban upgrading, economic restructuring and a clearly observable consolidation of political institutions.[...]

Features

This edited volume covers the multiple changes concerning urban governance in the course of the progressive transformation of the Pearl River Delta mega-urban region in China. Looking at the megacities Guangzhou and Shenzhen, it analyzes the maturing of socio-economic, political and spatial structures after the first waves of economic globalization, political transformation, and their rapid expansion and [...]

Contents

Part I: Introduction.- The Pearl River Delta in Progressive Transformation.- Part II: Transforming into Megacities.- Second Metamorphosis? Urban Restructuring and Planning Responses in Guangzhou and Shenzhen in the 21st Century.- The Influence of Regional Planning Administration on Local Development.- Cross-border Governance: The Merger of Guangzhou and Foshan.- Part III: The Reorientation Towards Urban Regeneration.- Three Olds: Experimental Urban Restructuring with Chinese Characteristics. Guangzhou and Shenzhen in Comparison.- Examining China's Urban Redevelopment: Land Types,[...]

Fields of interest

Landscape, Regional and Urban Planning; Urbanism; Regional Science

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-6673-0

Hardcover

2014. XII, 389 p. 101 illus., 83 illus. in color. (Advances in Asian Human-Environmental Research)

\$129.00

ISBN 978-94-007-6673-0

usually dispatched within 3 to 5 business days

A. Saikia, Gauhati University, Guwahati, India

Over-Exploitation of Forests

A Case Study from North East India

North east India is a global biodiversity hotspot but a quite understudied area. Forest loss has always been problematic in the area. Using Landsat satellite data from three periods (70s, 80s/90s and 2010s), forest loss is assessed in sample protected areas and other sites in the study area, processing is undertaken using image processing and standard GIS tools. The landscape metrics of selected sites are assessed using the widely used program FRAGSTATS. Drivers of forest loss are central in the discussion of the study.

Features

North east India is a global biodiversity hotspot but a quite understudied area. Forest loss has always been problematic in the area. Using Landsat satellite data from three periods (70s, 80s/90s and 2010s), forest loss is assessed in sample protected areas and other sites in the study area. Processing is undertaken using image processing and standard GIS tools. The landscape metrics of select sites are [...]

Contents

The Study Area.- Conceptualizing drivers of forest loss.- Data and Methods.- Land-use/land-cover change.- Landscape Metrics.- Drivers of Forest Loss.

Fields of interest

Geographical Information Systems / Cartography; Forestry Management; Biodiversity

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-01407-4

Softcover

2014. VIII, 72 p. 35 illus., 28 illus. in color. (SpringerBriefs in Geography)

\$54.99

ISBN 978-3-319-01407-4

usually dispatched within 3 to 5 business days

Law

A. Diver, University of Ulster, Londonderry, United Kingdom

A Law of Blood-ties - The 'Right' to Access Genetic Ancestry

This text collates and examines the jurisprudence that currently exists in respect of blood-tied genetic connection, arguing that the right to identity often rests upon the ability to identify biological ancestors, which in turn requires an absence of adult-centric veto norms. It looks firstly to the nature and purpose of the blood-tie as a unique item of birthright heritage, whose socio-cultural value perhaps lies mainly in preventing, or perhaps engendering, a feared or revered sense of 'otherness.' It then traces the evolution of the various policies on 'telling' and accessing truth, tying these to the diverse body of psychological theories on the need for unbroken attachments and [...]

Features

This text collates and examines the jurisprudence that currently exists in respect of blood-tied genetic connection, arguing that the right to identity often rests upon the ability to identify biological ancestors, which in turn requires an absence of adult-centric veto norms. It looks firstly to the nature and purpose of the blood-tie as a unique item of birthright heritage, whose socio-cultural value [...]

Contents

Introduction.- The Blood-tie as Socio-cultural 'Item': Ancestry Feared and Revered.- The Blood-tie: 'Properly Locked Drawers' and a 'Doomed Quality'.- Conceptualizing the "Right" to Avoid Origin Deprivation: International Law and Domestic Implementation.- Strasbourg Jurisprudence: 'Remembered Relatedness'.- Never Knowing 'One's Past': Genetic Ancestry Vetoes as Discrimination?.- 'Related' Matters in an Open Records Region: Relinquishment, Contact and Best Interests.- Blood-tie Preservation as Paramount: Best Interests of Child Outweighed?.- Guiding Principles, Hard Cases.- Conclusion:[...]

Fields of interest

Human Rights; Family; Private International Law, International & Foreign Law, Comparative Law; Childhood, Adolescence and Society

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01070-0

Hardcover

2014. XIII, 306 p.

\$179.00

ISBN 978-3-319-01070-0

usually dispatched within 3 to 5 business days

R. Abeyratne

Convention on International Civil Aviation

A Commentary

This book is both a repertory guide to the Convention on International Civil Aviation (Chicago Convention) as well as a legal analysis of the provisions of the treaty. It traces action taken by the ICAO Assembly and the Council in the implementation of the Convention from the first ICAO Assembly in 1947 until 2012. Above all, the book offers a commentary on the functional and moral fabric of the Chicago Convention, which is not only a multilateral legal instrument that sets out basic principles of air navigation and air transport, but also serves as a moral compass that brings the people of the world together. The teleological nature of the Chicago Convention is reflected from[...]

Features

This book is both a repertory guide to the Convention on International Civil Aviation (Chicago Convention) as well as a legal analysis of the provisions of the treaty. It traces action taken by the ICAO Assembly and the Council in the implementation of the Convention from the first ICAO Assembly in 1947 until 2012. Above all, the book offers a commentary on the functional and moral fabric of the Chicago [..]

Contents

Preamble.- Part I Air navigation.- Part II The International Civil Aviation Organization.- Part III International Air Transport.- Part IV Final Provisions.

Fields of interest

Law of the Sea, Air and Outer Space; Aerospace Technology and Astronautics

Target groups

Professional/practitioner

Type of publication

Handbook

More on www.springer.com/978-3-319-00067-1

Hardcover

2014. XIV, 737 p.

\$129.00

ISBN 978-3-319-00067-1

usually dispatched within 3 to 5 business days

F. Ruggieri (Ed.)

Criminal Proceedings, Languages and the European Union

Linguistic and Legal Issues

The book "Criminal proceedings, languages and the European Union: linguistic and legal issues" – the first attempt on this subject – deals with the current situation in the jurislinguistic studies, which cover comparative law, language and translation, towards the aim of the circulation of equivalent legal concepts in systems which are still very different from one another. In the absence of common cultures and languages, in criminal procedure it is possible to distinguish features that are typical of common law systems and features that are typical of civil law systems, according to the two different models of adversarial and inquisitorial trials. Therefore, the most problematic[...]

Features

The book "Criminal proceedings, languages and the European Union: linguistic and legal issues" – the first attempt on this subject – deals with the current situation in the jurislinguistic studies, which cover comparative law, language and translation, towards the aim of the circulation of equivalent legal concepts in systems which are still very different from one another. In the absence of common cultures [..]

Contents

The Lisbon Treaty, mutual legal assistance and judicial cooperation.- Multilingualism and legal acts.- The Treaty of Lisbon: constitutional provisions with an indefinite content.- Language and the environment: ascending and descending circulation of polysemantic words.- Language and criminal proceedings. Some case-studies.

Fields of interest

European Law; Comparative Linguistics; International Criminal Law; Private International Law, International & Foreign Law, Comparative Law; Criminal Law

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-37151-6

Hardcover

2014. IX, 238 p. 3 illus.

\$129.00

ISBN 978-3-642-37151-6

usually dispatched within 3 to 5 business days

P. Sun, China Univ. of Political Science&Law, Beijing, China (P.R.)

Human Rights Protection System in China

In recent years, more and more scholars in the world feel interested in the topic of human right protection status in China. This book hopes to serve as a window through which its readers will have a better understanding of theory and practice of human rights protection in the Chinese context. The book systematically introduces the dynamic development and progress of human rights protection in China, attaching great importance to the first white paper on Human Rights in China, "The state respects and guarantees human rights" included in the Constitution, National Human Rights Action Plan of China, and then putting forth fundamental principles to achieve international human rights[...]

Features

In recent years, more and more scholars in the world have become interested in human rights issues in China. This book hopes to serve as a window through which its readers will gain a better view of the theory and practice of human rights protection in the Chinese context. The book systematically introduces the dynamic development and progress of human rights protection in China, attaching great importance [..]

Contents

Acknowledgements.- Abstract.- Preface.- Abbreviations.- Chapter I Confucian Philosophy and Its Historical Contributions to Human Rights.- Chapter II The Dynamics of Human Rights Protection in China.- Chapter III The First White Paper—Human Rights in China.- Chapter IV "The State Respects and Guarantees Human Rights" Included in the Constitution.- Chapter V National Human Rights Action Plan as a Milestone.- Chapter VI Fundamental Principles for Achieving International Human Rights Standards in China.- Chapter VII Specific Measures to Improve Human Rights Protection Standards in[...]

Fields of interest

Human Rights

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-39662-5

Hardcover

2014. XXII, 366 p. 2 illus.

\$129.00

ISBN 978-3-642-39662-5

usually dispatched within 3 to 5 business days

B. Marten, Victoria University of Wellington, Wellington, New Zealand

Port State Jurisdiction and the Regulation of International Merchant Shipping

This book examines the concept of port state jurisdiction in the context of international maritime law. In particular the book focuses on situations where port states have used their jurisdiction over visiting foreign-flagged vessels to apply unilateral domestic law, as compared with the internationally-agreed standards enforced by regional port state control organisations. To illustrate the legal issues involved three recent pieces of legislation are analysed in detail: the United States' Cruise Vessel Security and Safety Act 2010, the EU's liability insurance directive of 2009, and Australia's Fair Work Act 2009. Key issues include the legality of port states' attempts to regulate[...]

Features

This book examines the concept of port state jurisdiction in the context of international maritime law. In particular the book focuses on situations where port states have used their jurisdiction over visiting foreign-flagged vessels to apply unilateral domestic law, as compared with the internationally-agreed standards enforced by regional port state control organisations. To illustrate the legal issues [...]

Contents

Introduction.- Background to Port State Jurisdiction.- The Growth of Port State Jurisdiction.- Port States Taking Charge: The United States' Cruise Vessel Security and Safety Act 2010.- Port States Behind the Scenes: The European Union's 2009 Insurance Directive.- Port States and Seafarers: Australia's Maritime Employment Legislation.- Conclusions.

Fields of interest

Law of the Sea, Air and Outer Space; Private International Law, International & Foreign Law, Comparative Law

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00350-4

Softcover

2014. XIV, 274 p. (Hamburg Studies on Maritime Affairs, Vol. 26)

\$179.00

ISBN 978-3-319-00350-4

usually dispatched within 3 to 5 business days

T. Kerikmäe, Tallinn University of Technology, Tallinn, Estonia (Ed.)

Protecting Human Rights in the EU

Controversies and Challenges of the Charter of Fundamental Rights

Human rights are much talked about and much written about, in academic legal literature as well as in political and other social sciences and the general political debate. This book argues that the universality of basic human rights is one of the values of the concept of rights. It points out the risk of a certain "inflation" caused by the current habit of talking so much and so often about human rights and of using them as a basis for claims of various kinds. These rights, their understanding and interpretation may need to become more "purist" to ensure that universal human rights as a concept survive. Another chapter concentrates on the analysis of the frames of "EU protected human[...]"

Features

Human rights are much talked about and much written about, in academic legal literature as well as in political and other social sciences and the general political debate. This book argues that the universality of basic human rights is one of the values of the concept of rights. It points out the risk of a certain "inflation" caused by the current habit of talking so much and so often about human rights and [...]

Contents

Introduction: EU Charter as a dynamic instrument.- EU Charter: Its nature, innovative character and horizontal effect.- The Future of Universality of Rights.- The Freedom to Conduct Business and the Right to Property: The EU Technology Transfer Block Exemption Regulation and the relationship between Intellectual Property and Competition Law.- The Contribution of the European Charter of Human Rights to the Right to Legal Aid.- Gender as an Impediment of Marriage. Free Movement of Citizens and EU Charter of Fundamental Rights.- The standard of judicial review in EU competition law[...]

Fields of interest

Human Rights; European Law; Political Science, general

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-38901-6

Hardcover

2014. VII, 198 p. 1 illus.

\$129.00

ISBN 978-3-642-38901-6

usually dispatched within 3 to 5 business days

R. Abeyratne

Regulation of Air Transport

The Slumbering Sentinels

Every ten years ICAO holds a worldwide air transport conference. The most recent such event - the 6th Worldwide Air Transport Conference (ATConf/6) - was held in Montreal from 18 to 22 March 2013. The questions posed by this book are: are the "clerical and administrative tasks" for ICAO which were decided on by ATConf/6 (and other preceding conferences) sufficient to meet the needs of the people of the world for safe, regular, economical and efficient air transport? Should ICAO not think outside of its 67-year-old box and become a beacon to air transport regulators? In other words, shouldn't the bottom line of ICAO's meaning and purpose in the field of air transport be to analyze[...]

Features

Every ten years ICAO holds a worldwide air transport conference. The most recent such event - the 6th Worldwide Air Transport Conference (ATConf/6) - was held in Montreal from 18 to 22 March 2013. The questions posed by this book are: are the "clerical and administrative tasks" for ICAO which were decided on by ATConf/6 (and other preceding conferences) sufficient to meet the needs of the people of the world [...]

Contents

The Nature and Role of ICAO.- Competition in Air Transport.- Connectivity.- The Facilitation Connection.- Consumer Rights.- Airlines - The Other Side of the Coin.- The Black Swan Effect.- Outcome of the Sixth Air Transport Conference (ATConf/6).- Conclusion.

Fields of interest

Law of the Sea, Air and Outer Space; Aerospace Technology and Astronautics; Production / Logistics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01040-3

Hardcover

2014. X, 218 p.

\$129.00

ISBN 978-3-319-01040-3

usually dispatched within 3 to 5 business days

Life Sciences

D.P. Abrol, Sher-e-Kashmir University of, Jammu, India

Asiatic Honeybee *Apis cerana*

Biodiversity Conservation and Agricultural Production

Despite its economic usefulness, biodiversity of Asian hive bee *Apis cerana* is suffering precipitous decline and is threatened with extinction in its entire native habitat. Although a number of publications have appeared on honeybees in the market no attempt has been made to approach the subject in systematically and in a comprehensive manner in case of *Apis cerana*. There is still not enough knowledge on different facets of biological conservation, agricultural production and role in improving food security and livelihoods. An attempt has been made in this book to fill the gap by providing detailed information on different aspects of *Apis cerana* leading to sustainability and [...]

Features

The world is facing food crisis as the growing human population is posing a threat to natural resources and fast approaching famine. In the next 50 years, the global population is expected to reach 9 billion doubling the food, feed and crop demand. Concomitantly, this situation has further aggravated because of pollinator decline worldwide resulting in pollination crisis. These problems have been further [...]

Contents

1. Introduction.- 2. Historical perspective.- 3. Biology of *Apis cerana*.- 4. Biogeography.- 5. Genetics and breeding.- 6. Reproductive biology.- 7. Pheromones.- 8. Molecular Phylogeny of *Apis cerana*.- 9. Interactions with other bee species.- 10. Dance language.- 11. Foraging.- 12. Floral resources.- 13. Pollination biology.- 14. Safety of bees in relation to pest management.- 15. Management problems.- 16. Population decline.- 17. Loss of genetic diversity.- 18. Diseases and enemies.- 19. Impact of climate changes.- 20. Behavioural defense against diseases and enemies.- 21.[...]

Fields of interest

Entomology; Agriculture; Biodiversity; Ecosystems; Nature Conservation

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-6927-4

Hardcover

2013. XXXIV, 1019 p. 78 illus., 31 illus. in color.

\$209.00

ISBN 978-94-007-6927-4

usually dispatched within 3 to 5 business days

R.A. Adams, S.C. Pedersen (Eds.)

Bat Evolution, Ecology, and Conservation

Recent advances in the study of bats have changed the way we understand this illusive group of mammals. This volume consist of 25 chapters and 57 authors from around the globe all writing on the most recent finding on the evolution, ecology and conservation of bats. The chapters in this book are not intended to be exhaustive literature reviews, but instead extended manuscripts that bring new and fresh perspectives. Many chapters consist of previously unpublished data and are repetitive of new insights and understanding in bat evolution, ecology and conservation. All chapters were peer-reviewed and revised by the authors. Many of the chapters are multi-authored to provide comprehensive[...]

Features

Recent advances in the study of bats have changed the way we understand this illusive group of mammals. This volume consist of 25 chapters and 57 authors from around the globe all writing on the most recent finding on the evolution, ecology and conservation of bats. The chapters are not intended to be exhaustive literature reviews, but instead extended manuscripts that bring new and fresh perspectives. Many [...]

Contents

Part 1. Evolutionary Patterns.- 1. How to Grow a Bat Wing.- 2. Time's Arrow in the Evolutionary Development of Bat Flight.- 3. Evolution of Echolocation.- 4. Nasal Emission and Noseleaves.- 5. Bat Facial and Lip Projections: Unique Integumentary Morphology.- 6. Bat Molecular Phylogenetics: Past, Present, and Future Directions.- 7. Of Bats and Molecules: Chromosomal Characters for Judging Phylogenetic Relationships.- Part 2. Ecology and Behaviour.- 8. Aeroecology.- 9. Response of Bat Diversity to Forest Disturbance in Southeast Asia: Insights from Long-term Research in Malaysia.- 10.[...]

Fields of interest

Evolutionary Biology; Conservation Biology / Ecology; Animal Ecology

Target groups

Graduate

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7396-1

Hardcover

2013. XVI, 547 p. 127 illus., 70 illus. in color.

\$239.00

ISBN 978-1-4614-7396-1

usually dispatched within 3 to 5 business days

T.A. Baudino, Texas A&M Health Science Center, Temple, USA (Ed.)

Cell-Cell Interactions

Methods and Protocols

In the second edition of Cell-Cell Interactions: Methods and Protocols, expert researchers in the field detail a collection of protocols to examine interactions between cells. These include protocols that focus on both in vivo and in vitro methods-based approaches. New updated chapters also bring together many currently used assays in examining cell-cell interactions and the biological consequences of those interactions. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and key tips on [...]

Features

In the second edition of Cell-Cell Interactions: Methods and Protocols, expert researchers in the field detail a collection of protocols to examine interactions between cells. These include protocols that focus on both in vivo and in vitro methods-based approaches. New updated chapters also bring together many currently used assays in examining cell-cell interactions and the biological [...]

Contents

Proteomics Analysis of Contact-initiated Eph Receptor-ephrin Signaling.- Control of Vascular Tube Morphogenesis and Maturation in 3D Extracellular Matrices by Endothelial Cells and Pericytes.- Analyzing Cell-cell Interactions in 3-dimensional Adhesion Assays.- Production of Spontaneously Beating Neonatal Rat Heart Tissue for Calcium and Contractile Studies.- Paracrine Communication Between Mechanically Stretched Myocytes and Fibroblasts.- Assessing Blood Brain Barrier Function using in vitro Assays.- Methods to Assess Tissue Permeability.- In vivo Quantification of Metastatic Tumor Cell[...]

Fields of interest

Cell Biology; Cell Physiology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-603-0

Hardcover

2013. XII, 204 p. 40 illus., 21 illus. in color. (Methods in Molecular Biology, Vol. 1066)

\$119.00

ISBN 978-1-62703-603-0

usually dispatched within 3 to 5 business days

L. Porter-Bolland, Instituto de Ecología A. C., Xalapa, Mexico; I. Ruiz-Mallén, Institute of Environmental Science, Bellaterra, Spain; C. Camacho-Benavides, Global Diversity Foundation, Xalapa, Mexico; S.R. McCandless (Eds.)

Community Action for Conservation

Mexican Experiences

This book provides an in-depth analysis on community conservation in Mexico. The volume explores vivid examples and case studies that illustrate some of the critical issues at stake, including the participation of local communities in national and global conservation, indigenous and local perceptions of conservation initiatives in Southern Mexico, and challenges in ICCA governance and ecotourism. The book also reviews methodological approaches for understanding and strengthening community conservation, touching upon such topics as community-based biodiversity monitoring and tools for understanding children's perceptions of community conservation. Written by international experts in the[...]

Features

This book provides an in-depth analysis on community conservation in Mexico. The volume explores vivid examples and case studies that illustrate some of the critical issues at stake, including the participation of local communities in national and global conservation, indigenous and local perceptions of conservation initiatives in Southern Mexico, and challenges in ICCA governance and ecotourism. The book [...]

Contents

Introduction: Biocultural diversity and the participation of local communities in national and global conservation.- Community conservation and ethnoecology: the three dimensions of local-level biodiversity maintenance.- Conservation and forest communities in Mexico: Experiences, visions and rights.- Community Conservation Experiences in Three Ejidos of the Lower Balsas River Basin, Michoacan.- Challenges in ICCA governance: the case of El Cordon del Reten in San Miguel Chimalapa, Oaxaca.- Local perceptions of conservation initiatives in the Calakmul region.- Community conservation in[...]

Fields of interest

Plant Sciences; Environmental Management; Nature Conservation; Biodiversity

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7955-0

Hardcover

2013. XII, 179 p. 21 illus., 12 illus. in color.

\$189.00

ISBN 978-1-4614-7955-0

usually dispatched within 3 to 5 business days

D.P.A. Sands, CSIRO, Brisbane, Australia; T.R. New, La Trobe University, Melbourne, Australia

Conservation of the Richmond Birdwing Butterfly in Australia

This survey of one the longest insect conservation campaigns in Australia deals with recovery of one of the most iconic endemic butterflies, the Richmond birdwing, threatened by clearance and fragmentation of subtropical rainforest in eastern Australia and the spread of an alien larval food-plant. Its conservation has involved many aspects of community involvement, developed over more than 20 years, and focused on habitat restoration and weed eradication, in conjunction with conservation of remaining forest fragments. The work has involved the entire historical range of the butterfly, addressed threats and emphasised landscape connectivity, and has enhanced recovery through extensive[...]

Features

This survey of one the longest insect conservation campaigns in Australia deals with one of the most iconic endemic papilionid butterflies, the Richmond birdwing (Ornithoptera richmondia), threatened by clearance and fragmentation of subtropical rainforest in eastern Australia and the spread of an alien and poisonous larval food-plant. It was thus lost from much of its former range during the twentieth [...]

Contents

1. Birdwing butterflies and their conservation needs.- 2. The Richmond birdwing butterfly.- 3. The food plants of the Richmond birdwing.- 4. The natural habitats and resources for the Richmond birdwing.- 5. Conservation needs and early concerns.- 6. Foundation of the programme: engaging the community.- 7. Expanding the Programme. The development of community networks: their achievements and roles in conservation and recovery.- 8. Habitat restoration and outcomes.- 9. Revising the Draft Recovery Plan.- 10. Broadening perspective.- References.- Appendices.- Index.

Fields of interest

Conservation Biology / Ecology; Entomology; Ecology; Applied Ecology; Urban Ecology

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-7169-7

Hardcover

2013. XIV, 209 p. 53 illus., 36 illus. in color.

\$189.00

ISBN 978-94-007-7169-7

usually dispatched within 3 to 5 business days

K. Venkataraman, Zoological Survey of India, Kolkata, India; C. Sivaperuman, Zoological Survey of India, Port Blair, India; C. Raghunathan, Zoological Survey of India, Port Blair, India (Eds.)

Ecology and Conservation of Tropical Marine Faunal Communities

This book provides insights into various aspects of marine faunal communities in India, which are extremely diverse due to the geomorphologic and climatic variations along the Indian coasts. Consisting of 30 chapters by experts in their respective fields, it is divided into two parts:- Part I: Tropical Marine Faunal Communities- Part II: Ecology and ConservationPart I highlights the diversity and distribution of Foraminifera; sponges associated with seagrass; Polychaeta; Opisthobranchia; oysters; copepods; horseshoe and brachyuran crabs; echinoderms; ascidians; fishes; fish parasites; and sea mammals. Topics of Part II include the status and environmental parameters of[...]

Features

This book provides insights into various aspects of marine faunal communities in India, which are extremely diverse due to the geomorphologic and climatic variations along the Indian coasts. Consisting of 30 chapters by experts in their respective fields, it is divided into two parts:- Part I: Tropical Marine Faunal Communities- Part II: Ecology and ConservationPart I [...]

Contents

The late Holocene foraminifera from Andaman Islands, Andaman Sea, Bay Of Bengal.- Distribution of live Planktonic and benthic foraminifera in the shelf off Port Blair and Hutbay, Andaman and Nicobar Islands, India.- Species composition and distribution of sponges (Phylum: Porifera) in the Seagrass ecosystem of Minicoy Atoll, Lakshadweep, India.- Diversity and distribution of Polychaetes from Tamil Nadu Coast, India.- Current Status of Indian Opisthobranch fauna.- Species diversity and abundance of Opisthobranch molluscs (Gastropoda: Opisthobranchia) in the coral reef environments of[...]

Fields of interest

Freshwater & Marine Ecology; Ecosystems; Biodiversity; Nature Conservation; Animal Ecology

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-38199-7

Hardcover

2013. XIX, 481 p. 142 illus., 103 illus. in color.

\$239.00

ISBN 978-3-642-38199-7

usually dispatched within 3 to 5 business days

C. Hobohm, Ecology and Environmental Education Work, Flensburg, Germany (Ed.)

Endemism in Vascular Plants

The book is the first comprehensive analysis of the macroecology and geobotany of endemic vascular plants with case-studies and analyses from different regions in the world. Endemism is a pre-extinction phenomenon. Endemics are threatened with extinction. Due to international nature conservation policies and due to the perception of the public the concept's importance is increasing. Endemism can result from different biological and environmental processes. Depending on the process conservation measures should be adapted. Endemic vascular plant taxa, in the setting of their species composition and vegetation types are important features of landscapes and indicators of the quality of[...]

Features

The book about Endemism in Vascular Plants is the first comprehensive analysis of the macroecology and geobotany of endemic vascular plants with case-studies and analyses from different regions in the world. Endemism is a pre-extinction phenomenon. Endemics are threatened with extinction. Due to international nature conservation policies and due to the perception of the public the importance of the [...]

Contents

Part I. The Meaning of Endemism.- 1. The Increasing Importance of Endemism: Responsibility, the Media and Education.- 2. How to Quantify Endemism.- Part II. Endemic Vascular Plants over Time.- 3. Factors that Create and Increase Endemism.- 4. Factors that Threaten and Reduce Endemism.- Part III. Endemic Vascular Plants in Space.- 5. Biogeography of Endemic Vascular Plants – Overview.- 6. Endemism on Islands - Case Studies.- 7. Endemism in Mainland Regions - Case Studies.- Part IV. Endemism in Vascular Plants – Synthesis.- Appendix.- Glossary.

Fields of interest

Biodiversity; Landscape Ecology; Plant Ecology; Conservation Biology / Ecology; Nature Conservation; Monitoring / Environmental Analysis

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-6912-0

Hardcover

2014. XIV, 348 p. 85 illus., 58 illus. in color. (Plant and Vegetation, Vol. 9)

\$189.00

ISBN 978-94-007-6912-0

usually dispatched within 3 to 5 business days

R. Alberio (Ed.)

Epiblast Stem Cells

Methods and Protocols

In Epiblast Stem Cells: Methods and Protocols, expert researchers in the field provide a detailed collection of techniques and protocols useful to the study of the biology of the pluripotent epiblast. These include methods and techniques used to study epiblast development in different amniotes. This collection brings together contributions from the fields of embryology, stem cell biology and developmental biology together, providing a single volume with detailed procedures for the isolation and culture of epiblasts at different stages of development, and techniques for the study of differentiation into specific lineages. Written in the highly successful Methods in Molecular Biology[...]

Features

In Epiblast Stem Cells: Methods and Protocols, expert researchers in the field provide a detailed collection of techniques and protocols useful to the study of the biology of the pluripotent epiblast. These include methods and techniques used to study epiblast development in different amniotes. This collection brings together contributions from the fields of embryology, stem cell biology and [...]

Contents

Generation and Characterization of Epiblast Stem Cells from Blastocyst-stage Mouse Embryos.- Reversion of Mouse Post-Implantation Epiblast Stem Cells to a Naïve Pluripotent State by Modulation of Signalling Pathways.- Converting Mouse Epiblast Stem Cells into Mouse Embryonic Stem Cells by using Small Molecules.- Isolation and Culture of Rabbit Embryonic Stem Cells.- Goat Embryonic Stem-like Cell Derivation and Characterization.- Derivation and Culture of Canine Embryonic Stem Cells.- Isolation and Culture of Porcine Embryonic Stem Cells.- Isolation and Culture of Pig Epiblast Stem[...]

Fields of interest

Cell Biology; Stem Cells

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-627-6

Hardcover

2013. XI, 216 p. 49 illus., 34 illus. in color. (Methods in Molecular Biology, Vol. 1074)

\$119.00

ISBN 978-1-62703-627-6

usually dispatched within 3 to 5 business days

N. Fuse, T. Kitamura, T. Haramura, K. Arikawa, Graduate University for Advanced Studies, Hayama, Japan; M. Imafuku

Evolution in the Dark

Adaptation of Drosophila in the Laboratory

How organisms come to possess adaptive traits is a fundamental question for evolutionary biology. Although it is almost impossible to demonstrate evolution in the laboratory, this issue can be approached by using an unusual organism, "Dark-fly": *Drosophila melanogaster* kept in complete darkness for 57 years through 1,400 generations, which corresponds to 28,000 years in terms of human generations. Has Dark-fly adapted to an environment of total darkness? If so, what is the molecular nature of the adaptation? In Evolution in the Dark, the remarkable findings from the Dark-fly project performed at Kyoto University are presented. It was found that Dark-fly did not have poor eyesight, but[...]

Features

How organisms come to possess adaptive traits is a fundamental question for evolutionary biology. Although it is almost impossible to demonstrate evolution in the laboratory, this issue can be approached by using an unusual organism, "Dark-fly": *Drosophila melanogaster* kept in complete darkness for 57 years through 1,400 generations, which corresponds to 28,000 years in terms of human generations. Has [...]

Contents

1 History of the "Dark-fly" project.- 2 Circadian rhythms of Dark-fly.- 3 Compound eyes of Dark-fly.- 4 Genome features of Dark-fly.

Fields of interest

Evolutionary Biology; Animal Genetics and Genomics; Developmental Biology

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-4-431-54146-2

Softcover

2014. XII, 55 p. 28 illus., 9 illus. in color. (SpringerBriefs in Biology)

\$54.99

ISBN 978-4-431-54146-2

usually dispatched within 3 to 5 business days

B.K. Sharma, S. Kulshreshtha, Government Shakambhar PG College, Jaipur, India; A.R. Rahmani (Eds.)

Faunal Heritage of Rajasthan, India

General Background and Ecology of Vertebrates

This is the first ever monumental and scientific documentation of the faunal wealth of the Indian Desert state of Rajasthan. This volume, the first of two, provides background on Rajasthan and covers species diversity and distribution of fauna. A scholarly contribution to the field of knowledge, it provides novel and vital information on the vertebrate faunal heritage of India's largest state. Broadly falling under the Indo-Malaya Ecozone, the three major biomes of Rajasthan include deserts and xeric shrublands, tropical and subtropical dry broadleaf forests, and tropical and subtropical moist broadleaf forests. The corresponding ecoregions to the above biomes are, respectively, the[...]

Features

This is the first ever monumental and scientific documentation of the faunal wealth of the Indian Desert state of Rajasthan. This volume, the first of two, provides background on Rajasthan and covers species diversity and distribution of fauna. A scholarly contribution to the field of knowledge, it provides novel and vital information on the vertebrate faunal heritage of India's largest state. [...]

Contents

Dedication-1.- Dedication-2.- Foreword.- Preface.- Acknowledgements.- Table of Contents.- Contributors.- Part I: Unveiling the Vivacious Rajasthan.- The Majestic Rajasthan: An Introduction.- Physiography and Biological Diversity of Rajasthan.- Historical, Socio-cultural and Mythological Aspects of Faunal Conservation in Rajasthan.- An Anthropological Account of Bionomic and Opprobrium between Communities and Animals in Rajasthan.- Fossil Records of Rajasthan.- Part II: Faunal Ecology: An Insight-Piscifauna and Herpetofauna.- Ichthyofauna of Rajasthan.- Chelonian Status and Conservation[...]

Fields of interest

Conservation Biology / Ecology; Animal Ecology; Nature Conservation; Biodiversity; Fish & Wildlife Biology & Management

Target groups

Graduate

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-0799-7

Hardcover

2013. XXXI, 645 p. 619 illus., 485 illus. in color.

\$279.00

ISBN 978-1-4614-0799-7

usually dispatched within 3 to 5 business days

S. Kellomäki, Univ of Eastern Finland, Joensuu, Finland; A. Kilpeläinen, Finnish Environment Institute, Joensuu, Finland; A. Alam, University of Eastern Finland, Joensuu, Finland (Eds.)

Forest BioEnergy Production

Management, Carbon sequestration and Adaptation

For thousands of years, forest biomass or wood has been among the main energy sources of humans around the world. Since the industrial revolution, fossil fuels have replaced wood and become the dominant source of energy. The use of fossil fuels has the disadvantage of increasing atmospheric concentrations of greenhouse gases (GHGs), especially carbon dioxide (CO₂), with the consequent warming of global climate and changes in precipitation. In this context, the substitution of fossil fuels with renewable energy sources like forest biomass is among the ways to mitigate climate change. This book summarizes recent experiences on how to manage forest land to produce woody biomass for[...]

Features

For thousands of years, forest biomass or wood has been among the main energy sources of humans around the world. Since the industrial revolution, fossil fuels have replaced wood and become the dominant source of energy. The use of fossil fuels has the disadvantage of increasing atmospheric concentrations of greenhouse gases (GHGs), especially carbon dioxide (CO₂), with the consequent warming of [...]

Contents

Chapter 1. Introduction.- PART I: Forest Management for Bioenergy Production.- Chapter 2. Tree species, genetics and regeneration for bioenergy feedstock in northern Europe.- Chapter 3. Short-rotation forestry for supplying biomass for energy production.- Chapter 4. Integrated production of timber and energy biomass in forestry.- Chapter 5. Nutrient management for sustainable production of energy biomass in boreal forests.- Chapter 6. Fertilization in boreal and temperate forests and the potential for biomass production.- Chapter 7. Integration of management measures for bioenergy[...]

Fields of interest

Plant Breeding / Biotechnology; Forestry Management; Energy Policy, Economics and Management

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8390-8

Hardcover

2013. XI, 268 p. 99 illus., 26 illus. in color.

\$139.00

ISBN 978-1-4614-8390-8

usually dispatched within 3 to 5 business days

T.M. Alconada Magliano, La Plata National University, La Plata, Argentina; S.N. Chulze, Rio Cuarto National University, Rio Cuarto, Argentina (Eds.)

Fusarium Head Blight in Latin America

Fusarium head blight (FHB) on small-grain cereals is one of the most devastating diseases. Several species can cause head blight, though *Fusarium graminearum* is the predominant pathogen in most regions. *F. graminearum* is one of the most intensively studied fungal plant pathogens. This book presents the current state of knowledge regarding mycological aspects that make wheat-Fusarium interaction, such as hyphal growth, morphogenesis in germinating spores, visualization of enzymatic hydrolysis, production of mycotoxins, inhibition of the hyphal growth by antagonist microorganisms, use of natural substances or by modification of the host resistance, as well as genetic analysis and[...]

Features

Fusarium head blight (FHB) on small-grain cereals is one of the most devastating diseases. Several species can cause head blight, though *Fusarium graminearum* is the predominant pathogen in most regions. *F. graminearum* is one of the most intensively studied fungal plant pathogens. This book presents the current state of knowledge regarding mycological aspects that make wheat-Fusarium interaction, such as hyphal [...]

Contents

List of Contributors.- Preface.- Part I: Fusarium Populations Associated with Fusarium Head Blight in Latin America.- 1. Population Structure of *Fusarium graminearum* Species Complex Genotypes and Chemotypes in Relation to Trichothecene Production.- 2. Species Identification, Genetic Diversity and Phenotypic Variation Studies on the *Fusarium graminearum* Complex Populations from Brazil.- 3. Diversity of Pathogen Populations Causing Fusarium Head Blight of Wheat in Uruguay.- 4. Ecophysiology of *Fusarium graminearum* Main Pathogen Associated to Fusarium Head Blight in Latin America.- Part[...]

Fields of interest

Plant Pathology; Fungus Genetics

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7090-4

Hardcover

2013. XX, 304 p. 53 illus., 11 illus. in color.

\$209.00

ISBN 978-94-007-7090-4

usually dispatched within 3 to 5 business days

Q. Zhang, Huazhong Agricultural University, Wuhan, China (P.R.);
R.A. Wing (Eds.)

Genetics and Genomics of Rice

This book provides a comprehensive coverage of the advances in genetics and genomics research on rice. The chapters feature the latest developments in rice research and cover such topics as the tools and resources for the functional analysis of rice genes, the identification of useful genes for rice improvement, the present understanding of rice development and biological processes, and the application of this present understanding towards rice improvement. The volume also features a perspective on synthesis and prospects, laying the groundwork for future advances in rice genetics and genomics. Written by authorities in the field, *Genetics and Genomics of Rice* will serve as an [...]

Features

This book provides a comprehensive coverage of the advances in genetics and genomics research on rice. The chapters feature the latest developments in rice research and cover such topics as the tools and resources for the functional analysis of rice genes, the identification of useful genes for rice improvement, the present understanding of rice development and biological processes, and the application of [...]

Contents

A reference rice genome sequence in the 10K genome era.- The Wild Relative of Rice – Genomes and Genomics.- Natural variation and sequencing-based genetics studies in rice.- Genome mapping, markers and QTLs.- Transposable element dynamics in rice and its wild relatives.- Molecular cytogenetics of rice and its wild relatives.- Mutant resources for functional analysis of the rice genome.- Transcriptome profiling in rice.- Epigenomics of rice.- Non-coding regulatory RNAs.- Disease resistance.- Insect Resistance.- Abiotic stress resistance.- Nitrogen and Phosphorus Uptake and Utilization.- [...]

Fields of interest

Plant Sciences; Plant Biochemistry; Plant Anatomy / Development; Plant Physiology; Plant Genetics and Genomics

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7902-4

Hardcover

2013. XV, 402 p. 51 illus., 40 illus. in color. (Plant Genetics and Genomics: Crops and Models, Vol. 5)

\$209.00

ISBN 978-1-4614-7902-4

usually dispatched within 3 to 5 business days

A.G. Kutikhin, Kemerovo State Medical Academy, Kemerovo,
Russian Federation; A.E. Yuzhlin

Genomics of Pattern Recognition Receptors

Applications in Oncology and Cardiovascular Diseases

This book offers comprehensive information on the polymorphisms of genes encoding pattern recognition receptors (PRRs). Following a short description of the general role of PRRs in the immune system, the structure and function of Toll-like and NOD-like receptors are examined in detail. The main focus is on the role of inherited variation in PRRs and their correlation to cancer and cardiovascular diseases. A review of all epidemiological investigations is included, and a concept of genomic risk markers for the prevention of various diseases is also discussed.

Features

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Contents

The Biology of Toll-like Receptors and NOD-like Receptors: Toggles of Inflammation.- Pattern Recognition Receptors, Gene Polymorphisms, and Cancer: A Double-Edged Sword.- Structural Genomic Variation in Toll-Like Receptor 4 and Cancer.- Structural Genomic Variation in Other Toll-like Receptors and Cancer.- Structural Genomic Variation in Toll-Like Receptor Signaling Pathway and Cancer.- Structural Genomic Variation in Toll-like Receptor Pathway and Prostate Cancer.- Structural Genomic Variation in NOD-Like Receptors and Cancer.- Structural Genomic Variation in Pattern Recognition [...]

Fields of interest

Receptors; Immunology; Cancer Research; Human Genetics; Oncology; Cardiology

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-0348-0687-9

Hardcover

2013. XI, 185 p. 2 illus., 1 illus. in color.

\$189.00

ISBN 978-3-0348-0687-9

usually dispatched within 3 to 5 business days

B.A. Horwitz, Technion – Israel Inst. of Technology, Haifa, Israel;
P.K. Mukherjee, Central Institute for Cotton Research, Nagpur,
India; M. Mukherjee, Central Institute for Cotton Research, Nagpur,
India; C.P. Kubicek (Eds.)

Genomics of Soil- and Plant-Associated Fungi

This volume addresses the similarities and also the differences in the genomes of soil saprophytes, symbionts, and plant pathogens by using examples of fungal species to illustrate particular principles. It analyzes how the specific interactions with the hosts and the influence of the environment may have shaped genome evolution. The relevance of fungal genetic research and biotechnological applications is shown for areas such as plant pathogenesis, biomass degradation, litter decomposition, nitrogen assimilation, antibiotic production, mycoparasitism, energy, ecology, and also for soil fungi turning to human pathogens. In addition to the model organisms *Neurospora* and *Aspergillus*, [...]

Features

This volume addresses the similarities and also the differences in the genomes of soil saprophytes, symbionts, and plant pathogens by using examples of fungal species to illustrate particular principles. It analyzes how the specific interactions with the hosts and the influence of the environment may have shaped genome evolution. The relevance of fungal genetic research and biotechnological applications is [...]

Contents

Genomic contributions to the study of soil and plant-interacting fungi.- Fungal genomics for energy and environment.- Advancement of functional genomics of a model species of *Neurospora* and its use for ecological genomics of soil fungi.- Major Plant Pathogens of the Magnaporthaceae Family.- *Aspergillus* - Genomics of a cosmopolitan fungus.- *Trichoderma* – genomic aspects of mycoparasitism and biomass degradation.- *Fusarium oxysporum*: A "moving" view of pathogenicity.- Genomics and spectroscopy provide novel insights into the mechanisms of litter decomposition and nitrogen assimilation by [...]

Fields of interest

Microbial Genetics and Genomics; Plant Pathology; Applied Microbiology; Soil Science & Conservation

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-39338-9

Hardcover

2013. XII, 388 p. 42 illus., 25 illus. in color. (Soil Biology, Vol. 36)

\$189.00

ISBN 978-3-642-39338-9

usually dispatched within 3 to 5 business days

H. Kimura, National Institut of Neuroscience, Tokyo, Japan (Ed.)

Hydrogen Sulfide and its Therapeutic Applications

The metabolism of sulfur especially by sulfurtransferases had been intensively studied in mid 1900's.

Three enzymes, cystathionine β -synthase (CBS), cystathionine γ -lyase (CSE) and 3-mercaptopyruvate sulfurtransferase (3MST) were found to have the capacity to produce H₂S in vitro. However, H₂S was recognized simply as a by-product of the metabolic pathways or as a marker for evaluating the activity of enzymes rather than as a physiological active molecule. In the late 1980's relatively high concentrations of sulfide were measured in the brain that led to the successive studies of identifying the physiological functions of H₂S. Recently, the steady-state concentrations of H₂S have[...]

Features

The metabolism of sulfur especially by sulfurtransferases had been intensively studied in mid 1900's.

Three enzymes, cystathionine β -synthase (CBS), cystathionine γ -lyase (CSE) and 3-mercaptopyruvate sulfurtransferase (3MST) were found to have the capacity to produce H₂S in vitro. However, H₂S was recognized simply as a by-product of the metabolic pathways or as a marker for evaluating [...]

Contents

Biogenesis and Catabolism of Hydrogen Sulfide.- Multiple roles of H₂S in inflammation – a new class of therapeutics?.- Hydrogen Sulfide and Oxygen Sensing.- The signal transduction of H₂S: identification of the 'receptor' for H₂S.- Hydrogen sulfide: Physiological and pathophysiological functions.- Therapeutic Applications of Hydrogen Sulfide.- Biological effects of H₂S inhalation and its therapeutic potential.- H₂S-mediated defense against antibiotics in bacteria.- Modulation of cellular signaling and induction of cytoprotection by hydrogen sulfide.

Fields of interest

Biochemistry; Medical Biochemistry; Pharmacology / Toxicology; Neurosciences

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-7091-1549-7

Hardcover

2013. IX, 207 p. 39 illus., 23 illus. in color.

\$209.00

ISBN 978-3-7091-1549-7

usually dispatched within 3 to 5 business days

R.J. Rose, The University of Newcastle, Callaghan, Australia (Ed.)

Legume Genomics

Methods and Protocols

Featuring current resources used to discover new legume family genes and to understand genes and their interactions, Legume Genomics: Methods and Protocols provides techniques from expert researchers to study these plants that are so vitally important for food, feed, human nutrition, bioenergy, and industrial purposes. This detailed volume covers genome characterization and analysis, transcriptome analysis and miRNA identification/analysis, forward and reverse genetics, molecular markers, as well as transformation strategies used to investigate gene function and many other topics. Written in the highly successful Methods in Molecular Biology series format, chapters include[...]

Features

Featuring current resources used to discover new legume family genes and to understand genes and their interactions, Legume Genomics: Methods and Protocols provides techniques from expert researchers to study these plants that are so vitally important for food, feed, human nutrition, bioenergy, and industrial purposes. This detailed volume covers genome characterization and analysis, transcriptome [...]

Contents

The Model Legume Genomes.- Fluorescent In Situ Hybridization (FISH) on Pachytene Chromosomes as a Tool for Genome Characterization.- Targeted Mutagenesis for Functional Analysis of Gene Duplication in Legumes.- RNA-Seq for Transcriptome Analysis in Non-Model Plants.- Functional Analysis of Legume Genome Arrays.- Genome-Wide Identification of MicroRNAs in Medicago truncatula by High-Throughput Sequencing.- Determining Abundance of MicroRNAs and Other Small RNAs in Legumes.- Forward Genetics Screening of Medicago truncatula Tnt1 Insertion Lines.- Reverse Genetics in Medicago truncatula[...]

Fields of interest

Plant Sciences; Plant Genetics and Genomics; Gene Function

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-612-2

Hardcover

2013. XI, 316 p. 53 illus., 23 illus. in color. (Methods in Molecular Biology, Vol. 1069)

\$139.00

ISBN 978-1-62703-612-2

usually dispatched within 3 to 5 business days

D. Rapaport, University of Tuebingen, Tuebingen, Germany; J.M. Hermann, University of Kaiserslautern, Kaiserslautern, Germany (Eds.)

Membrane Biogenesis

Methods and Protocols

Membrane proteins and membrane lipids form complex interactive systems that are highly dynamic and able to be studied only by combinations of different in vivo and in vitro techniques. In Membrane Biogenesis: Methods and Protocols, experts in the field present a broad collection of methods to study the biogenesis and function of cellular membranes. Beginning with how membrane lipids or membrane proteins can be studied, this detailed volume continues with sections covering different procedures to investigate the interaction of membrane proteins among each other or with membrane lipids, methods to study the biogenesis of membrane proteins and the dynamics of organelles, as well as[...]

Features

Membrane proteins and membrane lipids form complex interactive systems that are highly dynamic and able to be studied only by combinations of different in vivo and in vitro techniques. In Membrane Biogenesis: Methods and Protocols, experts in the field present a broad collection of methods to study the biogenesis and function of cellular membranes. Beginning with how membrane lipids or [...]

Contents

Quantitative Analysis of Cellular Lipids by Nano-Electrospray Ionization Mass Spectrometry.- Thin-Layer Chromatography of Phospholipids.- Analysis of Membrane Lipid Biogenesis Pathways Using Yeast Genetics.- Using 2D Crystals to Analyze the Structure of Membrane Proteins.- Crystallization of Membrane Proteins.- Molecular Dynamics Simulations of Membrane Proteins.- Site-Specific Fluorescent Probe Labeling of Mitochondrial Membrane Proteins.- Topology Determination of Untagged Membrane Proteins.- self-assembling GFP: A Versatile Tool for Plant (Membrane) Protein Analyses.- The Use of[...]

Fields of interest

Cell Biology; Membrane Biology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-486-9

Hardcover

2013. XIV, 404 p. 80 illus., 48 illus. in color. (Methods in Molecular Biology, Vol. 1033)

\$139.00

ISBN 978-1-62703-486-9

usually dispatched within 3 to 5 business days

G. Ghirlanda, Arizona State University, Tempe, USA; D. Forslund (Eds.)

Membrane Proteins

Folding, Association, and Design

Focusing on model systems for the study of structure, folding, and association in the membrane, *Membrane Proteins: Folding, Association, and Design* presents an overview of methods that can be applied to these intricate systems. The volume is divided into four detailed sections, covering association of transmembrane helices, interactions with the lipid bilayer, NMR methods, as well as a variety of engineering approaches. Written for the highly successful *Methods in Molecular Biology* series, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and [...]

Features

Focusing on model systems for the study of structure, folding, and association in the membrane, *Membrane Proteins: Folding, Association, and Design* presents an overview of methods that can be applied to these intricate systems. The volume is divided into four detailed sections, covering association of transmembrane helices, interactions with the lipid bilayer, NMR methods, as well as a variety of [...]

Contents

Use of Thiol-Disulfide Exchange Method to Study Transmembrane Peptide Association in Membrane Environments.- Measurement of Transmembrane Peptide Interactions in Liposomes Using Förster Resonance Energy Transfer (FRET).- Measuring Transmembrane Helix Interaction Strengths in Lipid Bilayers Using Steric Trapping.- Genetics Systems for Monitoring Interactions of Transmembrane Domains in Bacterial Membranes.- Analyzing the Effects of Hydrophobic Mismatch on Transmembrane α -Helices Using Tryptophan Fluorescence Spectroscopy.- Folding Alpha Helical Membrane Proteins into Liposomes In Vitro[...]

Fields of interest

Protein Science; Membrane Biology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-582-8

Hardcover

2013. X, 246 p. 61 illus., 37 illus. in color. (Methods in Molecular Biology, Vol. 1063)

\$119.00

ISBN 978-1-62703-582-8

usually dispatched within 3 to 5 business days

P. Cudic, Torrey Pines Institute for Molecular Stu, Port St. Lucie, USA (Ed.)

Peptide Modifications to Increase Metabolic Stability and Activity

In *Peptide Modifications to Increase Metabolic Stability and Activity*, expert researchers in the field provide summarized methods for preparation, purification of modified peptides, and assessment of their biochemical activities. These methods and protocols include preparation of conformationally constrained peptides, modification of peptide bonds, introduction of nonproteinogenic amino acids, and alteration of peptides' physical and biological properties by modification of the amino acid side chains and/or terminal residues. With additional chapter that describes new experimental approach for the detection of exogenous peptides within living cells using peptides labeled with heavy[...]

Features

In *Peptide Modifications to Increase Metabolic Stability and Activity*, expert researchers in the field provide summarized methods for preparation, purification of modified peptides, and assessment of their biochemical activities. These methods and protocols include preparation of conformationally constrained peptides, modification of peptide bonds, introduction of nonproteinogenic amino acids, and [...]

Contents

Hantzsch Based Macrocyclization Approach for the Synthesis of Thiazole Containing Cyclopeptides.- The Chemical Synthesis of α -Conotoxins and Structurally Modified Analogs with Enhanced Biological Stability.- Synthesis of AApeptides.- Peptoids and Peptide - Peptoid Hybrid Biopolymers as Peptidomimetics.- Synthesis of Side Chain N,N'-diaminoalkylated Derivatives of Basic Amino Acids for Application in Solid-phase Peptide Synthesis.- Study Protein Folding and Aggregation Using Non-natural Amino Acid p-cyanophenylalanine as a Sensitive Optical Probe.- Adamantoylated Biologically Active[...]

Fields of interest

Biochemistry; Nucleic Acid Chemistry

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-651-1

Hardcover

2013. IX, 241 p. 92 illus., 16 illus. in color. (Methods in Molecular Biology, Vol. 1081)

\$119.00

ISBN 978-1-62703-651-1

usually dispatched within 3 to 5 business days

K. Touhara (Ed.)

Pheromone Signaling

Methods and Protocols

Providing experimental methods and protocols for performing pheromone research in a variety of organisms ranging from invertebrates to vertebrates, *Pheromone Signaling: Methods and Protocols* covers a wide spectrum of experimental approaches necessary for handling pheromone molecules, measuring receptor response and neural activation, and analyzing behavioral output. A great deal of progress has been made in understanding the molecular mechanisms underlying pheromone action, largely due to the discovery of receptor genes, the advancement of imaging techniques, and key multi-disciplinary approaches including aspects of organic chemistry, biochemistry, molecular biology, [...]

Features

Providing experimental methods and protocols for performing pheromone research in a variety of organisms ranging from invertebrates to vertebrates, *Pheromone Signaling: Methods and Protocols* covers a wide spectrum of experimental approaches necessary for handling pheromone molecules, measuring receptor response and neural activation, and analyzing behavioral output. A great deal of progress has been [...]

Contents

Female Moth Pheromones.- Pheromones in the Fruit Fly.- Analysis of Volatile Mouse Pheromones by Gas Chromatography Mass Spectrometry.- Murine Non-Volatile Pheromones: Isolation of Exocrine Gland Secreting Peptide 1.- Chemical Analysis of Aquatic Pheromones in Fish.- Analysis of Ascarosides from *Caenorhabditis elegans* Using Mass Spectrometry and NMR Spectroscopy.- Identification of Chemosensory Receptor Genes from Vertebrate Genomes.- Functional Assays for Insect Olfactory Receptors in *Xenopus* Oocytes.- A Protocol for Heterologous Expression and Functional Assay for Mouse Pheromone[...]

Fields of interest

Cell Biology; Endocrinology; Receptors

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-618-4

Hardcover

2013. XV, 399 p. 74 illus., 30 illus. in color. (Methods in Molecular Biology, Vol. 1068)

\$139.00

ISBN 978-1-62703-618-4

usually dispatched within 3 to 5 business days

R. Imai, M. Yoshida, N. Matsumoto, Hokkaido University, Sapporo, Japan (Eds.)

Plant and Microbe Adaptations to Cold in a Changing World

Proceedings from Plant and Microbe Adaptations to Cold 2012

This book includes papers from keynote lecture and oral presentations of Plant and Microbe Adaptations to Cold (PMAC) 2012, an international conference on winter hardiness of crop and pathogenic microbes. The PMAC has been started in 1997 in Japan as an interdisciplinary forum for scientists and extension people working in the field in plant pathology, plant physiology, microbiology, and crop breeding to increase our knowledge and improve our understanding of overwintering of crops, forages and grasses and solve the problems associated with losses due to freezing and heavy snow cover. Successive meetings have been held in Iceland (2000), Canada (2003), Italy (2006), and Norway[...]

Features

Global warming is affecting agriculture in a wide range of the climatic zones. In contrast to the extensive debate over the effects of global warming during summer growth, the impact of rising winter temperature on agricultural production has received considerably less attention. However, climate changes can certainly affect winter conditions, and small changes in winter climate can have even more drastic [...]

Contents

1. Global change in winter climate and agricultural sustainability.- 2. Soil freezing dynamics in a changing climate: implications for agriculture.- 3. Winter climate change and ecological implications in temperate systems.- 4. Possible change of water and nitrate cycles associated with the frost-depth decrease under climate change.- 5. Soil Frost Control: Its Application to Volunteer Potato Management in a Cold Region.- 6. Climatic and physiological background of ice encasement damage of herbage plants.- 7. NO, antioxidants and metabolites as key players in plant cold acclimation.- 8.[...]

Fields of interest

Plant Sciences; Plant Genetics and Genomics; Microbial Genetics and Genomics; Plant Physiology; Plant Breeding / Biotechnology

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-1-4614-8252-9

Hardcover

2013. XIX, 352 p. 99 illus., 66 illus. in color.

\$199.00

ISBN 978-1-4614-8252-9

usually dispatched within 3 to 5 business days

L.K. Marsh, Global Conservation Institute, Santa Fe, USA; C. Chapman (Eds.)

Primates in Fragments

Complexity and Resilience

This book is number two in a series for Primates in Fragments. In this volume, ten years after the first, we continue to address issues regarding primates within a fractured landscape. There are seven sections based on specific categories of primates in fragments. In the Introductory section, authors discuss the issues surrounding primates in remnant habitats as well as encourage discussion about what we mean by fragmentation on a landscape scale. In the Long-Term and Regional Studies section, authors present information on changes that have occurred during longer studies as well as changes that have occurred over regions. In the Landscape, Metapopulations and the Matrix section,[...]

Features

This book is number two in a series for Primates in Fragments. In this volume, ten years after the first, we continue to address issues regarding primates within a fractured landscape. There are seven sections based on specific categories of primates in fragments. In the Introductory section, authors discuss the issues surrounding primates in remnant habitats as well as encourage discussion about what we mean [...]

Contents

Section I: Introduction.- 1. Because Conservation Counts: Primates and Fragmentation.- 2. Assessing Habitat Fragmentation Effects for Primates: The Importance of Evaluating Questions at the Correct Scale.- Section II: Long-term and Regional Studies.- 3. One Hundred Years of Solitude: Effects of Long-Term Forest Fragmentation on the Primate Community of Java, Indonesia.- 4. A Region-Wide Review of Mesoamerican Primates: Prioritizing for Conservation.- 5. Primates of the Biological Dynamics of Forest Fragments Project: A History.- 6. Lessons From Los Tuxtlas: 30 Years of Research Into[...]

Fields of interest

Ecology; Anthropology; Evolutionary Biology; Zoology

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8838-5

Hardcover

2013. XXII, 537 p. 120 illus., 84 illus. in color. (Developments in Primatology: Progress and Prospects)

\$179.00

ISBN 978-1-4614-8838-5

usually dispatched within 3 to 5 business days

J.F. Brinkworth, University of Montreal, Montreal, Canada; K. Pechenikina, Queens College, City University of New York, New York, USA (Eds.)

Primates, Pathogens, and Evolution

The immune systems of human and non-human primates have diverged over time, such that some species differ considerably in their susceptibility, symptoms, and survival of particular infectious diseases. Variation in primate immunity is such that major human pathogens - such as immunodeficiency viruses, herpesviruses and malaria-inducing species of Plasmodium - elicit striking differences in immune response between closely related species and within primate populations. These differences in immunity are the outcome of complex evolutionary processes that include interactions between the host, its pathogens and symbiont/commensal organisms. The success of some pathogens in establishing[...]

Features

The immune systems of humans and non-human primates have diverged such that these animals show inter- and intra-species variation in susceptibility, symptoms, and survival of particular infectious diseases. Variation in primate immunity is such that some major human pathogens - such as immunodeficiency viruses, herpesviruses and malaria-inducing species of Plasmodium - elicit striking [...]

Contents

Acknowledgements.- 1. Primates, pathogens and evolution.- Section I Immunity and Primate Evolution.- 2. Vertebrate Immune system evolution and comparative primate immunity.- 3. Genetic variation in the immune system of Old World monkeys: functional and selective effects.- 4. Toll-like receptor function and evolution in primates.- 5. Impact of natural selection due to malarial disease on human genetic variation.- 6. Parasitic lice help to fill in the gaps of early hominid history.- Section II Emergence and Divergent Disease Manifestation.- 7. Treponema pallidum infection in Primates:[...]

Fields of interest

Evolutionary Biology; Anthropology; Animal Genetics and Genomics; Infectious Diseases

Target groups

Graduate

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7180-6

Hardcover

2013. X, 428 p. 34 illus., 11 illus. in color. (Developments in Primatology: Progress and Prospects, Vol. 38)

\$179.00

ISBN 978-1-4614-7180-6

usually dispatched within 3 to 5 business days

K.K. Bence (Ed.)

Protein Tyrosine Phosphatase Control of Metabolism

Although phosphorylation of proteins on tyrosine is relatively rare compared to phosphorylation on serine or threonine residues, the past two decades of research into PTP function have led to a great appreciation of the critical role PTPs have in regulating basic cellular processes. Among these important roles is the regulation of cellular signaling pathways related to metabolism. This volume contains chapters which highlight many aspects of PTP function in the context of metabolism. Given the growing obesity and diabetes epidemics in the United States and throughout the world, the desire to identify possible therapeutic targets for treatment of these diseases is a high priority. In[...]

Features

Tyrosine phosphorylation is a rapid and reversible protein modification catalyzed by the yin and yang activities of protein tyrosine kinases (PTKs) and protein tyrosine phosphatases (PTPs). A multitude of PTPs have been implicated in human disease, with a growing number of PTPs now known to play major roles in prevalent metabolic diseases including obesity and type 2 diabetes. Recent studies into PTP [...]

Contents

Redox Regulation of PTPs in Metabolism: Focus on Assays.- Quantitative Modeling of PTPs and Implications for Studying Metabolic Signaling.- Protein-Tyrosine Phosphatase 1B Substrates and Control of Metabolism.- PTP1B and TCPTP in CNS Signaling and Energy Balance.- PTP1B in the Periphery: Regulating Insulin Sensitivity and ER Stress.- Role of Protein Tyrosine Phosphatase 1B in Hepatocyte-Specific Insulin and Growth Factor Signaling.- PTP1B in Obesity-Related Cardiovascular Dysfunction.- Role of SHP2 Protein Tyrosine Phosphatase in Cardiac Metabolism.- Metabolic Effects of Neural and[...]

Fields of interest

Protein Science; Endocrinology; Biochemistry; Biomedicine (general)

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7854-6

Hardcover

2013. XI, 273 p. 34 illus., 24 illus. in color.

\$209.00

ISBN 978-1-4614-7854-6

usually dispatched within 3 to 5 business days

M.D. Hirschey (Ed.)

Sirtuins

Methods and Protocols

Featuring a diverse array of model organisms and scientific techniques, *Sirtuins: Methods and Protocols* collects detailed contributions from experts in the field addressing this vital family of genes. Opening with methods to generate sirtuin biology tools, the book continues by covering methods to identify sirtuin substrates, to measure sirtuin activity, and to study sirtuin biology. Written in the highly successful *Methods in Molecular Biology* series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known[...]

Features

Featuring a diverse array of model organisms and scientific techniques, *Sirtuins: Methods and Protocols* collects detailed contributions from experts in the field addressing this vital family of genes. Opening with methods to generate sirtuin biology tools, the book continues by covering methods to identify sirtuin substrates, to measure sirtuin activity, and to study sirtuin biology. Written in the [...]

Contents

Introduction: Sirtuins in Aging and Diseases.- Sirtuins in Yeast: Phenotypes and Tools.- Studying the *C. elegans* Sirtuins.- Genetic and Biochemical Tools for Investigating Sirtuin Function in *Drosophila melanogaster*.- Generating Mammalian Sirtuin Tools for Protein-Interaction Analysis.- Mass Spectrometry-Based Detection of Protein Acetylation.- SILAC-Based Quantification of Sirt1-Responsive Lysine Acetylation.- Targeted Quantitation of Acetylated Lysine Peptides by Selected Reaction Monitoring Mass Spectrometry.- Identification of Deacetylase Substrates with the Biotin Switch Approach.-[...]

Fields of interest

Animal Genetics and Genomics; Proteomics

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-636-8

Hardcover

2013. XI, 314 p. 69 illus., 36 illus. in color. (Methods in Molecular Biology, Vol. 1077)

\$139.00

ISBN 978-1-62703-636-8

usually dispatched within 3 to 5 business days

J. Klein, N. Klein

Solitude of a Humble Genius - Gregor Johann Mendel: Volume 1

Formative Years

Gregor Johann Mendel continues to fascinate the general public as well as scholars, the former for his life and the latter for his achievements. *Solitude of a Humble Genius* is a two-volume biography presenting Mendel in the context of the history of biology and philosophy, and in the context of the setting in which he lived and worked. In this first volume the authors set the stage for a new interpretation of Mendel's achievements and personality. The period of Mendel's life covered by this volume is critical to understanding why he saw what other biologists, including Charles Darwin, for example, didn't. In searching for clues to Mendel's thinking, the authors discuss at length the[...]

Features

Gregor Johann Mendel continues to fascinate the general public as well as scholars, the former for his life and the latter for his achievements. *Solitude of a Humble Genius* is a two-volume biography presenting Mendel in the context of the history of biology and philosophy; and in the context of the setting in which he lived and worked. In this first volume the authors set the stage for a new [...]

Contents

Prelude: Heredity, Sex, and Species – the Greek View.- Silesia and Moravia – Mendel's Tortured Homeland.- The First Decade: The Childhood of a Farmer's Son.- Johann Mendel's Lehrjahre: The Second Decade.- The Third Decade: The Vow.- Into the Fourth Decade: The Failed Professor.

Fields of interest

Life Sciences (general); History of Science; Philosophy of Biology; Plant Genetics and Genomics

Target groups

Research

Type of publication

Biography

More on www.springer.com/978-3-642-35253-9

Hardcover

2013. XXI, 407 p. 86 illus., 6 illus. in color.

\$209.00

ISBN 978-3-642-35253-9

usually dispatched within 3 to 5 business days

T. Sota, H. Kagata, Kyoto University, Otsu, Japan; Y. Ando, Kyoto University, Otsu, Japan; S. Utsumi, Hokkaido University, Horokanai, Japan; T. Osono, Kyoto University, Otsu, Japan

Species Diversity and Community Structure

Novel Patterns and Processes in Plants, Insects, and Fungi

This book introduces recent progress in the study of species diversity and community structures in terrestrial organisms conducted by three groups at Kyoto University. First, it explains species diversity and the functioning of fungi in Asian regions as outlined by metagenomic approaches using next-generation sequencing technology. The advances in high-throughput sequencing technologies accelerate the speed of species inventorying, especially for microorganisms. Second, the study of complex interactions between herbivorous insects and plants in the community and ecosystem contexts is presented. Recent studies in community and ecosystem genetics shed light on these complex interactions[...]

Features

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Contents

1. Metagenomic approach yields insights into fungal diversity and functioning.- 2. Insect-plant Interactions in Plant-based Community / Ecosystem Genetics.- 3. Accelerated diversification by spatial and temporal isolation associated with life-history evolution in insects.

Fields of interest

Ecology; Fungus Genetics; Entomology

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-4-431-54260-5

Softcover

2014. X, 61 p. 14 illus., 3 illus. in color. (SpringerBriefs in Biology)

\$54.99

ISBN 978-4-431-54260-5

usually dispatched within 3 to 5 business days

A. Bresinsky, C. Körner, Universität Basel, Basel, Switzerland; J.W. Kadereit, Univ. Mainz, Mainz, Germany; G. Neuhaus, U. Sonnewald

Strasburger's Plant Sciences

Including Prokaryotes and Fungi

This famous book on botany was published for the first time in 1894 by Eduard Strasburger and his co-workers. The present edition is based on a translation of the 36th edition of the German "Strasburger" and contains additional contributions by renowned experts in the field. The "Strasburger" comprises a highly appealing and holistic approach to the structure, the systematics and evolution, the functioning, and ecology of plants. The book covers 14 chapters bundled into four main sections: (i) Molecular and morphological structure of plants and cells (ii) Physiology and metabolism (iii) Evolution and systematics of plants (iv) Ecology

Features

This famous book on botany was published for the first time in 1894 by Eduard Strasburger and his co-workers. The present edition is based on a translation of the 36th edition of the German "Strasburger" and contains additional contributions by renowned experts in the field. The "Strasburger" comprises a highly appealing and holistic approach to the structure, the systematics and evolution, the functioning, [...]

Contents

(I) Molecular and morphological structure of plants and cells.- (II) Physiology and metabolism.- (III) Evolution and systematics of plants.- (IV) Ecology.

Fields of interest

Plant Sciences; Agriculture; Forestry; Environment (general); Plant Physiology; Plant Ecology

Target groups

Research

Type of publication

Handbook

More on www.springer.com/978-3-642-15517-8

Hardcover

2013. IX, 1302 p. 1158 illus., 466 illus. in color. In 2 volumes, not available separately.

\$679.00

ISBN 978-3-642-15517-8

Due: October 28, 2013

2013. IX, 1302 p. 1158 illus., 466 illus. in color. eReference.

\$679.00

ISBN 978-3-642-15518-5

Online orders shipping within 2-3 days.

Hardcover

2013. IX, 1302 p. 1158 illus., 466 illus. in color. Print + eReference.

\$849.00

ISBN 978-3-642-15519-2

Due: September 30, 2013

E. Lichtfouse, UMR1347 Agroécologie, Dijon, France (Ed.)

Sustainable Agriculture Reviews

Volume 13

Sustainable agriculture is a rapidly growing field aiming at producing food and energy in a sustainable way for humans and their children. It is a discipline that addresses current issues: climate change, increasing food and fuel prices, poor-nation starvation, rich-nation obesity, water pollution, soil erosion, fertility loss, pest control and biodiversity depletion. This series gathers review articles that analyze current agricultural issues and knowledge, then proposes alternative solutions.

Features

Sustainable agriculture is a rapidly growing field aiming at producing food and energy in a sustainable way for humans and their children. Sustainable agriculture is a discipline that addresses current issues such as climate change, increasing food and fuel prices, poor-nation starvation, rich-nation obesity, water pollution, soil erosion, fertility loss, pest control, and biodiversity depletion. Novel, [...]

Contents

Leaf-cutting ants, biology and control.- Impact of pesticide productivity on food security.- Farmland birds and arable farming, a meta-analysis.- Phytoremediation, transgenic plants and microbes.- Management of pathogens of stored cereal grains.- Allelopathy for pest control.- Rice bed planting and foliar fertilization.- Integrated nutrient management and postharvest of crops.- Intercropping taro and bambara groundnut.- Land productivity and food security in Zhangjiagang, China.

Fields of interest

Life Sciences (general); Agriculture; Sustainable Development

Target groups

Research

Type of publication

Reviews

More on www.springer.com/978-3-319-00914-8

Hardcover

2013. V, 315 p. 66 illus., 57 illus. in color. (Sustainable Agriculture Reviews, Vol. 13)

\$189.00

ISBN 978-3-319-00914-8

usually dispatched within 3 to 5 business days

R. Aroca (Ed.)

Symbiotic Endophytes

This Soil Biology volume examines our current understanding of the mechanisms involved in the beneficial effects transferred to plants by endophytes such as rhizobial, actinorhizal, arbuscular mycorrhizal symbionts and yeasts. Topics presented include how symbiosis starts on the molecular level; chemical signaling in mycorrhizal symbiosis; genomic and functional diversity of endophytes; nitrogen fixation; nutrient uptake and cycling; as well as plant protection against various stress conditions. Further, the use of beneficial microorganisms as biopesticides is discussed, particularly the application of Plant Growth Promoter Rhizobacteria (PGPR) in agriculture with the aim to increase yields.

Features

This Soil Biology volume examines our current understanding of the mechanisms involved in the beneficial effects transferred to plants by endophytes such as rhizobial, actinorhizal, arbuscular mycorrhizal symbionts and yeasts. Topics presented include how symbiosis starts on the molecular level; chemical signaling in mycorrhizal symbiosis; genomic and functional diversity of endophytes; nitrogen [...]

Contents

Journey to Nodule Formation: From Molecular Dialogue to Nitrogen Fixation.- A Roadmap Towards A Systems Biology Description Of Bacterial Nitrogen Fixation.- Carbon Metabolism During Symbiotic Nitrogen Fixation.- Genomic and functional diversity of the sinorhizobial model group.- Establishment of Actinorhizal symbioses.- Abiotic Factors Influencing Nitrogen-fixing Actinorhizal Symbioses.- Diversity of Frankia strains, actinobacterial symbionts of actinorhizal plants.- Abiotic stress tolerance induced by endophytic PGPR.- Fighting Plant Diseases Through the Application of Bacillus and [...]

Fields of interest

Agriculture; Plant Breeding / Biotechnology; Microbiology

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-39316-7

Hardcover

2013. VIII, 348 p. 36 illus., 16 illus. in color. (Soil Biology, Vol. 37)

\$189.00

ISBN 978-3-642-39316-7

usually dispatched within 3 to 5 business days

K.-G. Kim, Seoul National University, Seoul, Korea, Republic of (South Korea)

The Demilitarized Zone (DMZ) of Korea

Protection, Conservation and Restoration of a Unique Ecosystem

Untouched since 1953, the Korean DMZ (Demilitarized Zone) has transformed itself into one of the few ecologically pristine zones and a vital habitat for endangered species. Often cited as a potential "peace park", it could one day be a common ground for reconciliation and harmony. A wealth of data and information has been produced over time, documenting significant aspects of the DMZ and its implications for human and ecological security, both in Korea and worldwide. However, there is no single book in English that brings together the findings on the mechanism of evolution, the ecology and biodiversity of the DMZ. "The DMZ of Korea", by Kwi-Gon Kim, is the first step in this [...]

Features

Untouched since 1953, the Korean DMZ (Demilitarized Zone) has transformed itself into one of the few ecologically pristine zones and a vital habitat for endangered species. Often cited as a potential "peace park", it could one day be a common ground for reconciliation and harmony. A wealth of data and information has been produced over time, documenting significant aspects of the DMZ and its [...]

Contents

History and Evolution of the DMZ Ecosystem.- Landscape Ecology of the DMZ.- Status and Ecological Resource Value of DMZ.- Habitats in the DMZ Area.- Species in the DMZ Area.- Biodiversity.- Wetland-Type Classification.- Biological Integrity-Assessing the Health of Wetland Ecosystems.- Threatening Factors in the DMZ.- Conservation and Management Strategies.

Fields of interest

Landscape Ecology; Biodiversity; Nature Conservation; Conservation Biology / Ecology

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-38462-2

Hardcover

2013. XIX, 583 p. 846 illus., 774 illus. in color.

\$209.00

ISBN 978-3-642-38462-2

usually dispatched within 3 to 5 business days

L. Soucek, Fundació Vall d'Hebron Institute of Onco, Barcelona, Spain; N.M. Sodik (Eds.)

The Myc Gene

Methods and Protocols

Myc controls multiple cellular functions, including cell proliferation, growth, differentiation and death, both directly and indirectly, through its modulation of downstream transcriptional programs. In The Myc Gene: Methods and Protocols, experts in the field summarize the standard and novel techniques that allow the studying of Myc mechanism of action in normal and cancer cells, in vitro and in vivo, in one succinct manual. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and key tips on [...]

Features

Myc controls multiple cellular functions, including cell proliferation, growth, differentiation and death, both directly and indirectly, through its modulation of downstream transcriptional programs. In The Myc Gene: Methods and Protocols, experts in the field summarize the standard and novel techniques that allow the studying of Myc mechanism of action in normal and cancer cells, in vitro and [...]

Contents

The Myc world within Reach.- Methods for the Expression, Purification, Preparation and Biophysical Characterization of Constructs of the c-Myc and Max b-HLH-LZs.- Analyzing Myc in Cell Transformation and Evolution.- Identifying Myc Interactors.- Detection of c-Myc Protein-Protein Interactions And Phosphorylation Status by Immunoprecipitation.- An Efficient Way of Studying Protein-Protein Interactions Involving HIF- α , c-Myc, and Sp1.- Methods for Determining Myc-induced Apoptosis.- Methods to Study Myc-regulated Cellular Senescence.- Chromatin Immunoprecipitation Assays for Myc and [...]

Fields of interest

Cell Biology; Human Genetics

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-428-9

Hardcover

2013. XI, 282 p. 44 illus., 29 illus. in color. (Methods in Molecular Biology, Vol. 1012)

\$119.00

ISBN 978-1-62703-428-9

usually dispatched within 3 to 5 business days

A.-M. Duchene (Ed.)

Translation in Mitochondria and Other Organelles

The present book gives an overview on the similarities and differences of the various translation systems. Moreover, it highlights the mechanisms and control of translation in mitochondria and other organelles such as chloroplasts, plastids and apicoplasts in different organisms. Lastly, it offers an outlook on future developments and applications that might be made possible by a better understanding of translation in mitochondria and other organelles.

Features

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Contents

Structural aspects of mitochondrial ribosome function.- Mechanism and control of protein synthesis in mammalian mitochondria.- Translation in mammalian mitochondria : Order and disorder linked to tRNA and Aminoacyl-tRNA synthetases.- Mitochondrial targeting of RNA and mitochondrial translation in yeast and mammals.- Mechanisms and control of protein synthesis in yeast mitochondria.- Mitochondrial translation in trypanosomes.- Translation in mitochondria and apicoplasts in Apicomplexa.- Translation in mitochondria in green algae and higher plants.- Translation in flowering plants [...]

Fields of interest

Protein Science; Cell Biology; Cytogenetics; Evolutionary Biology

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-39425-6

Hardcover

2013. VI, 265 p. 44 illus., 36 illus. in color.

\$189.00

ISBN 978-3-642-39425-6

usually dispatched within 3 to 5 business days

G. Barth (Ed.)

Yarrowia lipolytica

Biotechnological Applications

Due to various special physiological features and a genome that greatly differs in structure, gene content and organization from other yeasts, *Y. lipolytica* is widely used as a host system. With its characteristics, such as the ability to grow on lipids or grease, to accumulate oil and the high capacity for secretion of proteases and lipases, the yeast is of great interest for biotechnological applications. The main topics covered in this Microbiology Monograph are: expression and secretion of heterologous proteins; acid and alkaline extracellular proteases; genetics, production, biochemical characterization and biotechnological application of lipases; production and secretion of [...]

Features

Due to various special physiological features and a genome that greatly differs in structure, gene content and organization from other yeasts, *Y. lipolytica* is widely used as a host system. With its characteristics, such as the ability to grow on lipids or grease, to accumulate oil and the high capacity for secretion of proteases and lipases, the yeast is of great interest for biotechnological [...]

Contents

Catherine Madzak and Jean Marie Beckerich: Heterologous protein expression and secretion in *Yarrowia lipolytica*.- David Ogrydziak: Acid and alkaline extracellular proteases of *Yarrowia lipolytica*.- Patrick Fickers, Vincent Sauveplane and Jean Marc Nicaud: The lipases from *Y. lipolytica*: genetics, production, regulation and biochemical characterization.- Patrick Fickers and Jean Marc Nicaud: Biotechnological applications of *Yarrowia lipolytica* lipases: an overview.- Christina Otto, Martina Holz and Gerold Barth: Production of organic acids by *Yarrowia lipolytica*.- Yves Waché: Production [...]

Fields of interest

Eukaryotic Microbiology; Biotechnology; Applied Microbiology; Biochemistry

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-38582-7

Hardcover

2013. VII, 268 p. 25 illus., 5 illus. in color. (Microbiology Monographs, Vol. 25)

\$189.00

ISBN 978-3-642-38582-7

usually dispatched within 3 to 5 business days

Linguistics

A. Łyda, University of Silesia, Sosnowiec, Poland; K. Szcześniak, University of Silesia, Sosnowiec, Poland (Eds.)

Awareness in Action

The Role of Consciousness in Language Acquisition

The papers included in the volume look at how language awareness affects the outcomes of foreign and second language acquisition in advanced learners. The book focuses on questions such as how much linguistic knowledge is open to the learner's conscious experience, what should and should not be considered the knowledge of language, how language awareness can be enhanced in the classroom, and, most crucially, what effects language awareness has on attained proficiency. Some papers in the volume also address methodological challenges of researching language awareness, such as the difficulty of defining and measuring awareness with sufficient precision.

Features

The papers included in the volume look at how language awareness affects the outcomes of foreign and second language acquisition in advanced learners. The book focuses on questions such as how much linguistic knowledge is open to the learner's conscious experience, what should and should not be considered the knowledge of language, how language awareness can be enhanced in the classroom, and, most crucially, [...]

Contents

Teaching.- Learning.- Culture.

Fields of interest

Applied Linguistics; Language Education

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00460-0

Hardcover

2014. XVI, 268 p. 29 illus. (Second Language Learning and Teaching)

\$129.00

ISBN 978-3-319-00460-0

usually dispatched within 3 to 5 business days

M. Pawlak, Adam Mickiewicz University, Kalisz, Poland; L. Aronin, Oranim Academic College of Education, Tivon, Israel (Eds.)

Essential Topics in Applied Linguistics and Multilingualism

Studies in Honor of David Singleton

This book brings together papers dealing with essential issues in applied linguistics and multilingualism that have been contributed by leading figures in these two fields and present state-of-the-art developments in theory and research. The first part includes articles touching on various aspects of multiple-language acquisition, with a particular emphasis on the role of affordances, the interfaces between language and thought, and factors influencing the process of language learning. Part Two deals with individual variations in the acquisition of additional languages, focusing in particular on the impact of such variables as age, aptitude, motivation and learning deficits. Finally, [...]

Features

This book brings together papers dealing with essential issues in applied linguistics and multilingualism that have been contributed by leading figures in these two fields and present state-of-the-art developments in theory and research. The first part includes articles touching on various aspects of multiple-language acquisition, with a particular emphasis on the role of affordances, the interfaces between [...]

Contents

Can you Learn to Love Grammar and so Make it Grow? On the Role of Affect in L2 Development.- It's All in the Eyes: How Language Dominance, Salience, and Context Affect Eye Movements During Idiomatic Language Processing. The Critical Period Hypothesis for Second Language Acquisition: Tailoring the Coat of Many Colors.- The Association Between Aptitude Component and Language Skills in Young Learners.- Cross-Linguistic Influence in L2 Writing: The Role of Short-Term Memory.- Another Look at Temporal Variation in Language Learning Motivation: Results of a Study.- Testing Linguistic [...]

Fields of interest

Applied Linguistics; Language Education

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01413-5

Hardcover

2014. VIII, 305 p. 38 illus., 19 illus. in color. (Second Language Learning and Teaching)

\$179.00

ISBN 978-3-319-01413-5

usually dispatched within 3 to 5 business days

Materials Science

null Industrieverband Klebstoffe e. V. (Ed.)

Adhesives Technology Compendium

The new "Adhesives Technology Compendium 2013", the English-language version of the well-known "Handbuch Klebtechnik", is being published in annual alternation with the German printed version, enabling all those involved in adhesives throughout the world to find the very latest information on the products and services of the German adhesives industry. The Compendium of more than 100 company profiles provides a comprehensive overview of suppliers of adhesive raw materials and adhesives as well as equipment suppliers, research facilities and service providers — supplemented by the latest legislation, European standards, testing methods and statistical overviews. In addition to the [...]

Features

The new "Adhesives Technology Compendium 2013", the English-language version of the well-known "Handbuch Klebtechnik", is being published in annual alternation with the German printed version, enabling all those involved in adhesives throughout the world to find the very latest information on the products and services of the German adhesives industry. The Compendium of more than 100 company profiles provides a [...]

Fields of interest

Surfaces and Interfaces, Thin Films; Operating Procedures, Materials Treatment

Target groups

Professional/practitioner

Type of publication

GWV Special Issue

More on www.springer.com/978-3-658-03222-7

Softcover

2013. Approx. 300 p.

\$39.99

ISBN 978-3-658-03222-7

Due: September 14, 2013

I.J. McCollm, University of Bradford, Bradford, United Kingdom

Dictionary of Ceramic Science and Engineering

The third edition of the Dictionary of Ceramic Science and Engineering builds on the heavily revised 2nd edition which, in turn, expanded the original edition by some 4000 entries to include new fabrication, testing, materials, and vocabulary. The proven basis of the first two editions has been retained but new words and phrases have been added from the rapidly advancing electronic, nanoparticle and modern materials engineering fields. Additionally, all measurements in SI units are given to facilitate communication among the many sub-disciplines touched on by ceramics, ensuring that this publication remains the field's standard reference work for years to come. This extended edition [...]

Features

The third edition of the Dictionary of Ceramic Science and Engineering builds on the heavily revised 2nd edition which, in turn, expanded the original edition by some 4000 entries to include new fabrication, testing, materials, and vocabulary. The proven basis of the first two editions has been retained but new words and phrases have been added from the rapidly advancing electronic, [...]

Contents

Dictionary.- Appendix.- Bibliography.

Fields of interest

Ceramics, Glass, Composites, Natural Materials

Target groups

Research

Type of publication

Dictionary

More on www.springer.com/978-94-007-0915-7

Hardcover

2013. X, 549 p.

\$349.00

ISBN 978-94-007-0915-7

usually dispatched within 3 to 5 business days

D.C. Joy, University of Tennessee, Knoxville, USA

Helium Ion Microscopy

Principles and Applications

Helium Ion Microscopy: Principles and Applications describes the theory and discusses the practical details of why scanning microscopes using beams of light ions – such as the Helium Ion Microscope (HIM) – are destined to become the imaging tools of choice for the 21st century. Topics covered include the principles, operation, and performance of the Gaseous Field Ion Source (GFIS), and a comparison of the optics of ion and electron beam microscopes including their operating conditions, resolution, and signal-to-noise performance. The physical principles of Ion-Induced Secondary Electron (iSE) generation by ions are discussed, and an extensive database of iSE yields for many elements[...]

Features

Helium Ion Microscopy: Principles and Applications describes the theory and discusses the practical details of why scanning microscopes using beams of light ions – such as the Helium Ion Microscope (HIM) – are destined to become the imaging tools of choice for the 21st century. Topics covered include the principles, operation, and performance of the Gaseous Field Ion Source (GFIS), and a [...]

Contents

Chapter 1: Introduction to Helium Ion Microscopy.- Chapter 2: Microscopy with Ions - A brief history.- Chapter 3: Operating the Helium Ion Microscope.- Chapter 4: Ion-Solid Interactions and Image Formation.- Chapter 5: Charging and Damage.- Chapter 6: Microanalysis with the HIM.- Chapter 7: Ion Generated Damage.- Chapter 8: Working with other Ion beams.- Chapter 9: Patterning and Nanofabrication.- Conclusion.- Bibliography.- Appendix: iSE Yields, and IONiSE parameters for He+ excitation of Elements and Compounds.- Index.

Fields of interest

Characterization and Evaluation of Materials; Spectroscopy and Microscopy; Spectroscopy / Spectrometry; Nanotechnology; Nanoscale Science and Technology

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8659-6

Softcover

2013. VIII, 64 p. 29 illus., 16 illus. in color. (SpringerBriefs in Materials)

\$54.99

ISBN 978-1-4614-8659-6

usually dispatched within 3 to 5 business days

J. Ahmed, HITEC University, Taxila, Pakistan; M.Y. Siyal, Nanyang Technological University, Singapore, Singapore; F. Adeel, HITEC University, Taxila, Pakistan; A. Hussain, HITEC University, Taxila, Pakistan

Optical Signal Processing by Silicon Photonics

The main objective of this book is to make respective graduate students understand the nonlinear effects inside SOI waveguide and possible applications of SOI waveguides in this emerging research area of optical fibre communication. This book focuses on achieving successful optical frequency shifting by Four Wave Mixing (FWM) in silicon-on-insulator (SOI) waveguide by exploiting a nonlinear phenomenon.

Features

The main objective of this book is to make respective graduate students understand the nonlinear effects inside SOI waveguide and possible applications of SOI waveguides in this emerging research area of optical fibre communication. This book focuses on achieving successful optical frequency shifting by Four Wave Mixing (FWM) in silicon-on-insulator (SOI) waveguide by exploiting a nonlinear phenomenon.

Contents

Recent Trends in Optical Fibers.- Recent Trends in Optical Networks.- Advancement in Silicon Photonics.- Optical Signal Processing.- Four Wave Mixing in Silicon Waveguide.- Implementation and Analysis Using Matlab.

Fields of interest

Optical and Electronic Materials; Microwaves, RF and Optical Engineering; Applied Optics, Optoelectronics, Optical Devices

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-981-4560-10-8

Softcover

2013. XI, 126 p. 60 illus., 24 illus. in color. (SpringerBriefs in Materials)

\$54.99

ISBN 978-981-4560-10-8

usually dispatched within 3 to 5 business days

R. Vajtai (Ed.)

Springer Handbook of Nanomaterials

The Springer Handbook of Nanomaterials covers the description of materials which have dimension on the "nanoscale". The description of the nanomaterials in this Handbook follows the thorough but concise explanation of the synergy of structure, properties, processing and applications of the given material. The Handbook mainly describes materials in their solid phase; exceptions might be e.g. small sized liquid aerosols or gas bubbles in liquids. The materials are organized by their dimensionality. Zero dimensional structures collect clusters, nanoparticles and quantum dots, one dimensional are nanowires and nanotubes, while two dimensional are represented by thin films and surfaces.[...]

Features

Forewords by Claes-Göran Granqvist, Uppsala University, Sweden, and Neal F. Lane, Rice University, Texas.- Part A NanoCarbons.- Part B NanoMetals.- Part C NanoCeramics.- Part D NanoSemiconductors.- Part E Nanocomposites and Solutions.- Part F Nanoporous Materials.- Part G Organic and Bio Nanomaterials.- Part H Applications and Impact Acknowledgements.

Contents

Forewords by Claes-Göran Granqvist, Uppsala University, Sweden, and Neal F. Lane, Rice University, Texas.- Part A NanoCarbons.- Part B NanoMetals.- Part C NanoCeramics.- Part D NanoSemiconductors.- Part E Nanocomposites and Solutions.- Part F Nanoporous Materials.- Part G Organic and Bio Nanomaterials.- Part H Applications and Impact Acknowledgements.

Fields of interest

Nanotechnology; Structural Materials; Optical and Electronic Materials; Ceramics, Glass, Composites, Natural Materials; Biomaterials

Target groups

Professional/practitioner

Type of publication

Handbook

More on www.springer.com/978-3-642-20594-1

Hardcover

2013. 1500 p. 685 illus. in color.

\$499.00

ISBN 978-3-642-20594-1

Due: August 28, 2013

N.A. Zimbovskaya, University of Puerto Rico at Humacao,
Humacao, Puerto Rico

Transport Properties of Molecular Junctions

A comprehensive overview of the physical mechanisms that control electron transport and the characteristics of metal-molecule-metal (MMM) junctions. As far as possible, methods and formalisms presented elsewhere to analyze electron transport through molecules are avoided. This title introduces basic concepts—a description of the electron transport through molecular junctions—and briefly describes relevant experimental methods. Theoretical methods commonly used to analyze the electron transport through molecules are presented. Various effects that manifest in the electron transport through MMMs, as well as the basics of density-functional theory and its applications to electronic[...]

Features

A comprehensive overview of the physical mechanisms that control electron transport and the characteristics of metal-molecule-metal (MMM) junctions is presented. As far as possible, methods and formalisms presented elsewhere to analyze electron transport through molecules are avoided. This title introduces basic concepts—a description of the electron transport through molecular junctions—and briefly [...]

Contents

Preface.- General Description.- Transport Theory.- Ballistic Transport.- Inelastic Transport.- Electronic Structure Calculations in Molecules.- Nanoelectronic Applications of Molecular Junctions.- Conclusion.- Appendix.- Bibliography.- Index.

Fields of interest

Nanotechnology; Electronics and Microelectronics, Instrumentation; Applied and Technical Physics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-8010-5

Hardcover

2013. XIII, 338 p. 104 illus., 95 illus. in color. (Springer Tracts in Modern Physics, Vol. 254)

\$179.00

ISBN 978-1-4614-8010-5

usually dispatched within 3 to 5 business days

A.S. Kurllov, Ural Division of the Russian Academy, Ekaterinburg,
Russian Federation; A.I. Gusev, Ural Division of the Russian Academy,
Ekaterinburg, Russian Federation

Tungsten Carbides

Structure, Properties and Application in Hardmetals

This book embraces the entire range of problems associated with phase equilibria in "tungsten – carbon" binary system and related ternary systems, nonstoichiometry, disorder and order in different tungsten carbides, electronic and crystal structure of these carbides. The main application of tungsten carbides is constituent in hardmetals for cutting tools. In the last 20 years, the most active efforts were made in synthesis and application of nanocrystalline tungsten carbide for the production of nanostructured hardmetals. The present book describes in detail different methods for production of nanocrystalline tungsten carbide. The peculiarities of sintering of Co hardmetals from[...]

Features

This book embraces the entire range of problems associated with phase equilibria in "tungsten – carbon" binary system and related ternary systems, nonstoichiometry, disorder and order in different tungsten carbides, electronic and crystal structure of these carbides. The main application of tungsten carbides is constituent in hardmetals for cutting tools. In the last 20 years, the most active efforts were [...]

Contents

Introduction.- Phases and Equilibria in the W – C and W – Co – C Systems.- Ordering of Tungsten Carbides.- Nanocrystalline Tungsten Carbide.- Hardmetals WC – Co Based on Nanocrystalline Powders of Tungsten Carbide WC.

Fields of interest

Ceramics, Glass, Composites, Natural Materials; Physical Chemistry; Applied and Technical Physics; Solid State Physics; Metallic Materials

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00523-2

Hardcover

2013. XIV, 242 p. 111 illus., 6 illus. in color. (Springer Series in Materials Science, Vol. 184)

\$129.00

ISBN 978-3-319-00523-2

usually dispatched within 3 to 5 business days

Mathematics

M.A. Kaashoek, L. Rodman, H.J. Woerdeman (Eds.)

Advances in Structured Operator Theory and Related Areas

The Leonid Lerer Anniversary Volume

This volume is dedicated to Leonid Lerer on the occasion of his seventieth birthday. The main part presents recent results in Lerer's research area of interest, which includes Toeplitz, Toeplitz plus Hankel, and Wiener-Hopf operators, Bezout equations, inertia type results, matrix polynomials, and related areas in operator and matrix theory. Biographical material and Lerer's list of publications complete the volume.

Features

This volume is dedicated to Leonid Lerer on the occasion of his seventieth birthday. The main part presents recent results in Lerer's research area of interest, which includes Toeplitz, Toeplitz plus Hankel, and Wiener-Hopf operators, Bezout equations, inertia type results, matrix polynomials, and related areas in operator and matrix theory. Biographical material and Lerer's list of publications complete the volume.

Contents

Introduction.- List of publications of Leonid Lerer.- Contributions by various authors.

Fields of interest

Operator Theory; Difference and Functional Equations; Systems Theory, Control

Target groups

Research

Type of publication

Collection of essays

More on www.springer.com/978-3-0348-0638-1

Hardcover

2013. XIX, 246 p. 10 illus., 8 illus. in color. (Operator Theory: Advances and Applications, Vol. 237)

\$139.00

ISBN 978-3-0348-0638-1

usually dispatched within 3 to 5 business days

M. Trifković, University of Victoria, Victoria, Canada

Algebraic Theory of Quadratic Numbers

By focusing on quadratic numbers, this advanced undergraduate or master's level textbook on algebraic number theory is accessible even to students who have yet to learn Galois theory. The techniques of elementary arithmetic, ring theory and linear algebra are shown working together to prove important theorems, such as the unique factorization of ideals and the finiteness of the ideal class group. The book concludes with two topics particular to quadratic fields: continued fractions and quadratic forms. The treatment of quadratic forms is somewhat more advanced than usual, with an emphasis on their connection with ideal classes and a discussion of Bhargava cubes. The numerous [...]

Features

By focusing on quadratic numbers, this advanced undergraduate or master's level textbook on algebraic number theory is accessible even to students who have yet to learn Galois theory. The techniques of elementary arithmetic, ring theory and linear algebra are shown working together to prove important theorems, such as the unique factorization of ideals and the finiteness of the ideal class group. The book [...]

Contents

1 Examples.- 2 A Crash Course in Ring Theory.- 3 Lattices.- 4 Arithmetic in $\mathbb{Q}[\sqrt{D}]$.- 5 The Ideal Class Group and Geometry of Numbers.- 6 Continued Fractions.- 7 Quadratic Forms.- Appendix.- Hints to Selected Exercises.- Index.

Fields of interest

Number Theory; Algebra

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-1-4614-7716-7

Softcover

2013. XI, 197 p. 29 illus. (Universitext)

\$69.99

ISBN 978-1-4614-7716-7

usually dispatched within 3 to 5 business days

A.B. Buan, NTNU, Trondheim, Norway; I. Reiten, NTNU, Trondheim, Norway; O. Solberg, NTNU, Trondheim, Norway (Eds.)

Algebras, Quivers and Representations

The Abel Symposium 2011

This book features survey and research papers from The Abel Symposium 2011: Algebras, quivers and representations, held in Balestrand, Norway 2011. It examines a very active research area that has had a growing influence and profound impact in many other areas of mathematics like, commutative algebra, algebraic geometry, algebraic groups and combinatorics. This volume illustrates and extends such connections with algebraic geometry, cluster algebra theory, commutative algebra, dynamical systems and triangulated categories. In addition, it includes contributions on further developments in representation theory of quivers and algebras. Algebras, Quivers and Representations is targeted at [...]

Features

This book features survey and research papers from The Abel Symposium 2011, held in Balestrand, Norway 2011. It examines a very active research area that has had a growing influence and profound impact in many other areas of mathematics like commutative algebra, algebraic geometry, algebraic groups and combinatorics. This volume illustrates and extends such connections with algebraic geometry, cluster [...]

Contents

C. Amiot: Preprojective algebras, singularity categories and orthogonal decompositions.- L. Avramov: (Contravariant) Koszul duality for DG algebras.- R. Buchweitz: The fundamental group of a morphism in a triangulated category.- K. Erdmann: On Hochschild cohomology of weakly symmetric special biserial algebras.- D. Happel: Algebras of finite global dimension.- K. Igusa (with G. Todorov): Continuous Frobenius categories.- D.A. Jorgensen: Triangle functors from generic hypersurfaces.- Y. Kodama (with L. Williams): Combinatorics of KP solutions from the real Grassmannian.- H. Krause: [...]

Fields of interest

Commutative Rings and Algebras; Algebraic Geometry; Associative Rings and Algebras; Category Theory, Homological Algebra; Dynamical Systems and Ergodic Theory; Algebra

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-39484-3

Hardcover

2013. XX, 298 p. 23 illus., 1 illus. in color. (Abel Symposia, Vol. 8)

\$109.00

ISBN 978-3-642-39484-3

usually dispatched within 3 to 5 business days

I.R. Shafarevich

Basic Algebraic Geometry 2

Schemes and Complex Manifolds

Shafarevich's Basic Algebraic Geometry has been a classic and universally used introduction to the subject since its first appearance over 40 years ago. As the translator writes in a prefatory note, "For all [advanced undergraduate and beginning graduate] students, and for the many specialists in other branches of math who need a liberal education in algebraic geometry, Shafarevich's book is a must." The second volume is in two parts: Book II is a gentle cultural introduction to scheme theory, with the first aim of putting abstract algebraic varieties on a firm foundation; a second aim is to introduce Hilbert schemes and moduli spaces, that serve as parameter spaces for other [...]

Features

Shafarevich's Basic Algebraic Geometry has been a classic and universally used introduction to the subject since its first appearance over 40 years ago. As the translator writes in a prefatory note, "For all [advanced undergraduate and beginning graduate] students, and for the many specialists in other branches of math who need a liberal education in algebraic geometry, Shafarevich's book is a [...]

Contents

Preface.- Book I. Varieties in Projective Space: Chapter I. Basic Notions.- Chapter II. Local Properties.- Chapter III. Divisors and Differential Forms.- Chapter IV. Intersection Numbers.- Algebraic Appendix.- References.- Index.

Fields of interest

Algebraic Geometry; Theoretical, Mathematical and Computational Physics

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-3-642-38009-9

Hardcover

Original third Russian edition published in one volume by MCCME, Moscow, 2007

2013. XIV, 262 p. 12 illus.

\$69.99

ISBN 978-3-642-38009-9

usually dispatched within 3 to 5 business days

A. D'Onofrio (Ed.)

Bounded Noises in Physics, Biology, and Engineering

Since the parameters in dynamical systems of biological interest are inherently positive and bounded, bounded noises are a natural way to model the realistic stochastic fluctuations of a biological system that are caused by its interaction with the external world. Bounded Noises in Physics, Biology, and Engineering is the first contributed volume devoted to the modeling of bounded noises in theoretical and applied statistical mechanics, quantitative biology, and mathematical physics. It gives an overview of the current state-of-the-art and is intended to stimulate further research. The volume is organized in four parts. The first part presents the main kinds of bounded noises and[...]

Features

Since the parameters in dynamical systems of biological interest are inherently positive and bounded, bounded noises are a natural way to model the realistic stochastic fluctuations of a biological system that are caused by its interaction with the external world. Bounded Noises in Physics, Biology, and Engineering is the first contributed volume devoted to the modeling of bounded noises in [...]

Contents

Introduction.- Part I : Modeling of Bounded Noises and Their Applications in Physics.- On Bounded Stochastic Processes.- Dynamics of Systems With Randomly Disordered Periodic Excitations.- Noise-Induced Phenomena: Effects of Noises Based on Tsallis Statistics.- Dynamical Systems Driven by Dichotomous Noise.- Stochastic Oscillator : Brownian Motion With Adhesion.- Numerical Study of Energetic Stability For Harmonic Oscillator With Fluctuating Damping Parameter.- A Moment-Based Approach to Bounded Non-Gaussian Colored Noise.- Spatiotemporal Bounded Noises, and Their Application to the[...]

Fields of interest

Mathematical Modeling and Industrial Mathematics; Mathematical and Computational Biology; Theoretical, Mathematical and Computational Physics; Appl. Mathematics / Computational Methods of Engineering; Probability Theory and Stochastic Processes; Complex Systems

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7384-8

Hardcover

2013. XVI, 285 p. 87 illus., 39 illus. in color. (Modeling and Simulation in Science, Engineering and Technology)

\$109.00

ISBN 978-1-4614-7384-8

usually dispatched within 3 to 5 business days

B.J. Goldengorin, D. Krushinsky, P.M. Pardalos

Cell Formation in Industrial Engineering

Theory, Algorithms and Experiments

This book focuses on a development of optimal, flexible, and efficient models and algorithms for cell formation in group technology. Its main aim is to provide a reliable tool that can be used by managers and engineers to design manufacturing cells based on their own preferences and constraints imposed by a particular manufacturing system. This tool could potentially lower production costs by minimizing other costs in a number of areas, thereby increasing profit in a manufacturing system. In the volume, the cell formation problem is considered in a systematic and formalized way, and several models are proposed, both heuristic and exact. The models are based on general clustering[...]

Features

This book focuses on a development of optimal, flexible, and efficient models and algorithms for cell formation in group technology. Its main aim is to provide a reliable tool that can be used by managers and engineers to design manufacturing cells based on their own preferences and constraints imposed by a particular manufacturing system. This tool could potentially lower production costs by minimizing [...]

Contents

1. The problem of cell formation.- 2. The p-Median problem.- 3. Application of the PMP to cell formation in group technology.- 4. The minimum multi-cut problem and an exact model for cell formation.- 5. Multiobjective nature of cell formation.- 6. Pattern-based heuristic for the cell formation problem in group technology.- 7. Branch-and-bound algorithm for bi-criterion cell formation problems.- 8. Summary and conclusions.- A. Solutions to the 35 CF instances from [71].- Index.- References.

Fields of interest

Computational Science and Engineering; Operations Research, Mathematical Programming; Mathematical Modeling and Industrial Mathematics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-8001-3

Hardcover

2013. XIV, 206 p. 52 illus., 39 illus. in color. (Springer Optimization and Its Applications, Vol. 79)

\$109.00

ISBN 978-1-4614-8001-3

usually dispatched within 3 to 5 business days

U. Zannier, Scuola Normale Superiore, Pisa, Italy (Ed.)

Colloquium De Giorgi 2010-2012

Since 2001 the Scuola Normale Superiore di Pisa has organized the "Colloquio De Giorgi", a series of colloquium talks named after Ennio De Giorgi. The Colloquio is addressed to a general mathematical audience, and especially meant to attract graduate students and advanced undergraduate students. The lectures are intended to be not too technical, in fields of wide interest. They must provide an overview of the general topic, possibly in a historical perspective, together with a description of more recent progress. The idea of collecting the materials from these lectures and publishing them in annual volumes came out recently, as a recognition of their intrinsic mathematical interest,[...]

Features

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Contents

Yves André: Galois theory beyond algebraic numbers and algebraic functions.- Nicholas M. Katz: Simple things we don't know.- Endre Szemerédi: Is laziness paying off?.- Dan Abramovich: Moduli of algebraic and tropical curves.- Elias M. Stein: Three projection operators in complex analysis.- Shou-Wu Zhang: Congruent numbers and Heegner points.

Fields of interest

Mathematics (general)

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-88-7642-455-7

Softcover

2013. Approx. 70 p. (Colloquia (Scuola Normale Superiore), Vol. 4)

\$29.99

ISBN 978-88-7642-455-7

Due: September 28, 2013

C. Dawson, The University of Texas at Austin, Austin, USA; M. Gertsen, Stanford University, Stanford, USA (Eds.)

Computational Challenges in the Geosciences

Computational Challenges in the Geosciences addresses a cross-section of grand challenge problems arising in geoscience applications, including groundwater and petroleum reservoir simulation, hurricane storm surge, oceanography, volcanic eruptions and landslides, and tsunamis. Each of these applications gives rise to complex physical and mathematical models spanning multiple space-time scales, which can only be studied through computer simulation. The data required by the models is often highly uncertain, and the numerical solution of the models requires sophisticated algorithms which are mathematically accurate, computationally efficient and yet must preserve basic physical[...]

Features

Computational Challenges in the Geosciences addresses a cross-section of grand challenge problems arising in geoscience applications, including groundwater and petroleum reservoir simulation, hurricane storm surge, oceanography, volcanic eruptions and landslides, and tsunamis. Each of these applications gives rise to complex physical and mathematical models spanning multiple space-time [...]

Contents

Physical and Computational Issues in the Numerical Modeling of Ocean Circulation, R.L. Higdon.- Modeling Hazardous, Free-Surface Geophysical Flows with Depth-Averaged Hyperbolic Systems and Adaptive Numerical Methods, D.L. George.- Real-Time Forecasting and Visualization of Hurricane Waves and Storm Surge using SWAN+ADCIRC and FigureGen, J.C. Dietrich, C.N. Dawson, J.M. Proft, M.T. Howard, G. Wells, J.G. Fleming, R.A. Luettich, Jr., J.J. Westerink, Z. Cobell, M. Vitse, H. Lander, B.O. Blanton, C.M. Szpilka, J.H. Atkinson.- Methane in Subsurface: Mathematical Modeling and Computational[...]

Fields of interest

Mathematical Applications in the Physical Sciences; Meteorology; Geophysics / Geodesy

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-1-4614-7433-3

Hardcover

2013. IX, 167 p. 57 illus. (The IMA Volumes in Mathematics and its Applications, Vol. 156)

\$139.00

ISBN 978-1-4614-7433-3

usually dispatched within 3 to 5 business days

D.H. Bailey, H.H. Bauschke, P. Borwein, Simon Fraser University, Burnaby, Canada; F. Garvan, M. Théra, J. Vanderwerff, H. Wolkowicz, Faculty of Mathematics, Waterloo, Canada (Eds.)

Computational and Analytical Mathematics

In Honor of Jonathan Borwein's 60th Birthday

The research of Jonathan Borwein has had a profound impact on optimization, functional analysis, operations research, mathematical programming, number theory, and experimental mathematics. Having authored more than a dozen books and more than 300 publications, Jonathan Borwein is one of the most productive Canadian mathematicians ever. His research spans pure, applied, and computational mathematics as well as high performance computing, and continues to have an enormous impact: MathSciNet lists more than 2500 citations by more than 1250 authors, and Borwein is one of the 250 most cited mathematicians of the period 1980-1999. He has served the Canadian Mathematics Community through his[...]

Features

The research of Jonathan Borwein has had a profound impact on optimization, functional analysis, operations research, mathematical programming, number theory, and experimental mathematics. Having authored more than a dozen books and more than 300 publications, Dr. Borwein is one of the most productive Canadian mathematicians ever. His research spans pure, applied, and computational mathematics as well as [...]

Contents

1. Normal Numbers and Pseudorandom Generators (D.H. Bailey and J.M. Borwein).- 2. New Demiclosedness Principles for (Firmly) Nonexpansive Operators (H.H. Bauschke).- 3. Champnowne's Number, Strong Normality, and the X Chromosome (A. Belshaw and P. Borwein).- 4. Optimality Conditions for Semivectorial Bilevel Convex Optimal Control Problems (H. Bonnel and J. Morgan).- 5. Monotone Operators Without Enlargements (J.M. Borwein, R.S. Burachik, and L. Yao).- 6. A Brøndsted-Rockafellar Theorem for Diagonal Subdifferential Operators (R.I. Boţ and E.R. Csetnek).- 7. A q-Analog of Euler's[...]

Fields of interest

Number Theory; Functional Analysis; Operator Theory; Operations Research, Mathematical Programming

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-1-4614-7620-7

Hardcover

2013. XV, 701 p. 33 illus., 18 illus. in color. (Springer Proceedings in Mathematics & Statistics, Vol. 50)

\$189.00

ISBN 978-1-4614-7620-7

usually dispatched within 3 to 5 business days

R. López, University of Granada, Granada, Spain

Constant Mean Curvature Surfaces with Boundary

The study of surfaces with constant mean curvature (CMC) is one of the main topics in classical differential geometry. Moreover, CMC surfaces are important mathematical models for the physics of interfaces in the absence of gravity, where they separate two different media, or for capillary phenomena. Further, as most techniques used in the theory of CMC surfaces not only involve geometric methods but also PDE and complex analysis, the theory is also of great interest for many other mathematical fields. While minimal surfaces and CMC surfaces in general have already been treated in the literature, the present work is the first to present a comprehensive study of "compact surfaces with[...]

Features

The study of surfaces with constant mean curvature (CMC) is one of the main topics in classical differential geometry. Moreover, CMC surfaces are important mathematical models for the physics of interfaces in the absence of gravity, where they separate two different media, or for capillary phenomena. Further, as most techniques used in the theory of CMC surfaces not only involve geometric methods but also [...]

Contents

Introduction.- Surfaces with Constant Mean Curvature.- Constant Mean Curvature Embedded Surfaces.- The Flux Formula for Constant Mean Curvature Surfaces.- The Area and the Volume of a Constant Mean Curvature Surface.- Constant Mean Curvature Discs with Circular Boundary.- The Dirichlet Problem of the CMC Equation.- The Dirichlet Problem in Unbounded Domains.- Constant Mean Curvature Surfaces in Hyperbolic Space.- The Dirichlet Problem in Hyperbolic Space.- Constant Mean Curvature Surfaces in Lorentz-Minkowski Space.- Appendix: A. The Variation Formula of the Area and the Volume.- B.Open[...]

Fields of interest

Differential Geometry; Partial Differential Equations; Geometry

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-39625-0

Hardcover

2013. XIV, 292 p. 64 illus. (Springer Monographs in Mathematics)

\$109.00

ISBN 978-3-642-39625-0

usually dispatched within 3 to 5 business days

A. Némethi, Hungarian Academy of Sciences, Budapest, Hungary;
A. Szilárd, Hungarian Academy of Sciences, Budapest, Hungary
(Eds.)

Deformations of Surface Singularities

The present publication contains a special collection of research and review articles on deformations of surface singularities, that put together serve as an introductory survey of results and methods of the theory, as well as open problems and examples.

The aim is to collect material that will help mathematicians already working or wishing to work in this area to deepen their insight and eliminate the technical barriers in this learning process. Additionally, we introduce some material which emphasizes the newly found relationship with the theory of Stein fillings and symplectic geometry. This links two main theories of mathematics: low dimensional topology and algebraic[...]

Features

The present publication contains a special collection of research and review articles on deformations of surface singularities, that put together serve as an introductory survey of results and methods of the theory, as well as open problems, important examples and connections to other areas of mathematics. The aim is to collect material that will help mathematicians already working or wishing to work in [...]

Contents

Altmann, K. and Kastner, L.: Negative Deformations of Toric Singularities that are Smooth in Codimension Two.- Bhupal, M. and Stipsicz, A.I.: Smoothing of Singularities and Symplectic Topology.- Ilten, N.O.: Calculating Milnor Numbers and Versal Component Dimensions from P-Resolution Fans.- Némethi, A.: Some Meeting Points of Singularity Theory and Low Dimensional Topology.- Stevens, J.: The Versal Deformation of Cyclic Quotient Singularities.- Stevens, J.: Computing Versal Deformations of Singularities with Hauser's Algorithm.- Van Straten, D.: Tree Singularities: Limits, Series and [...]

Fields of interest

Algebraic Topology; Algebraic Geometry

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-39130-9

Hardcover

2013. Approx. 280 p. (Bolyai Society Mathematical Studies, Vol. 23)

\$109.00

ISBN 978-3-642-39130-9

Due: July 29, 2013

A.I. Saichev, W. Woyczynski

Distributions in the Physical and Engineering Sciences, Volume 2

Linear and Nonlinear Dynamics in Continuous Media

Distributions in the Physical and Engineering Sciences is a comprehensive exposition on analytic methods for solving science and engineering problems. It is written from the unifying viewpoint of distribution theory and enriched with many modern topics which are important for practitioners and researchers. The goal of the books is to give the reader, specialist and non-specialist, useable and modern mathematical tools in their research and analysis. Volume 2: Linear and Nonlinear Dynamics of Continuous Media continues the multivolume project which endeavors to show how the theory of distributions, also called the theory of generalized functions, can be used by graduate students and [...]

Features

Distributions in the Physical and Engineering Sciences is a comprehensive exposition on analytic methods for solving science and engineering problems. It is written from the unifying viewpoint of distribution theory and enriched with many modern topics that are important for practitioners and researchers. The goal of the books is to give the reader, specialist and non-specialist, useable and modern [...]

Contents

III POTENTIALS, DIFFUSIONS AND WAVES.- 9 Potential Theory and Fundamental Solutions of Elliptic Equations.- 10 Diffusions and Parabolic Evolution Equations.- 11 Waves and Hyperbolic Equations.- 12 First Order Nonlinear PDEs and Conservation Laws.- 13 Generalized Solutions of First Order Nonlinear PDEs.- 14 Nonlinear waves and growing interfaces: 1-D Burgers-KPZ models.- 15 Other Standard Nonlinear Models of Higher Order.- Appendix A: Answers and Solutions.- Appendix B: Bibliographical Notes.

Fields of interest

Mathematics (general)

Target groups

Research

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-0-8176-3942-6

Hardcover

2013. XXIV, 409 p. 144 illus., 18 illus. in color. (Applied and Numerical Harmonic Analysis)

\$79.99

ISBN 978-0-8176-3942-6

usually dispatched within 3 to 5 business days

A. Sorokin, P.M. Pardalos (Eds.)

Dynamics of Information Systems: Algorithmic Approaches

Dynamics of Information Systems: Algorithmic Approaches presents recent developments and results found by participants of the Fourth International Conference on the Dynamics of Information Systems, which took place at the University of Florida, Gainesville FL, USA on February 20-22, 2012. The purpose of this conference was to bring together scientists and engineers from industry, government, and universities to exchange knowledge and results in a broad range of topics relevant to the theory and practice of the dynamics of information systems. Dynamics of Information plays an increasingly critical role in our society. The influence of information on social, biological, genetic, and [...]

Features

Dynamics of Information Systems: Algorithmic Approaches presents recent developments and results found by participants of the Fourth International Conference on the Dynamics of Information Systems, which took place at the University of Florida, Gainesville FL, USA on February 20-22, 2012. The purpose of this conference was to bring together scientists and engineers from industry, government, and [...]

Contents

Numerical computations with infinite and infinitesimal numbers: Theory and applications (Y.D. Sergeyev).- Dynamic Composition and Analysis of modern service-oriented information systems (H. Abdulrab, E. Babkin, and J. Doucy).- Estimating Customer Service Times on a Rail Network from GPS Data (S. Spanton).- A Risk-Averse Game-Theoretic Approach to Distributed Control (K. Pham and M. Pachter).- Static Teams and Stochastic Games (M. Pachter and K. Pham).- A Framework for Coordination in Distributed Stochastic Systems: Output Feedback and Performance Risk Aversion (K. Pham).- Modulating [...]

Fields of interest

Operations Research, Mathematical Programming; Dynamical Systems and Ergodic Theory; Systems Theory, Control; Operation Research / Decision Theory

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-1-4614-7581-1

Hardcover

2013. VIII, 344 p. 82 illus., 49 illus. in color. (Springer Proceedings in Mathematics & Statistics, Vol. 51)

\$169.00

ISBN 978-1-4614-7581-1

usually dispatched within 3 to 5 business days

L. Lovász, Eötvös Loránd University, Budapest, Hungary; I. Ruzsa, Hungarian Academy of Sciences, Budapest, Hungary; V.T. Sós, Hungarian Academy of Sciences, Budapest, Hungary; D. Palvolgyi, Eötvös University, Budapest, Hungary (Eds.)

Erdős Centennial

Paul Erdős was one of the most influential mathematicians of the twentieth century, whose work in number theory, combinatorics, set theory, analysis, and other branches of mathematics has determined the development of large areas of these fields. In 1999, a conference was organized to survey his work, his contributions to mathematics, and the far-reaching impact of his work on many branches of mathematics. On the 100th anniversary of his birth, this volume undertakes the almost impossible task to describe the ways in which problems raised by him and topics initiated by him (indeed, whole branches of mathematics) continue to flourish. Written by outstanding researchers in these areas, [...]

Features

Paul Erdős was one of the most influential mathematicians of the twentieth century, whose work in number theory, combinatorics, set theory, analysis, and other branches of mathematics has determined the development of large areas of these fields. In 1999, a conference was organized to survey his work, his contributions to mathematics, and the far-reaching impact of his work on many branches of mathematics. [...]

Contents

Contents.- Preface.- Alon, N.: Paul Erdős and Probabilistic Reasoning.- Benjamini, I.: Euclidean vs. Graph Metric.- Bollobas, B. and Riordan, O.: The Phase Transition in the Erdős-Rényi Random Graph Process.- Bourgain, J.: Around the Sum-product Phenomenon.- Breuillard, E., Green, B. and Tao, T.: Small Doubling in Groups.- Diamond, H. G.: Erdős and Multiplicative Number Theory.- Füredi, Z. and Simonovits, M.: The History of Degenerate (Bipartite) Extremal Graph Problems.- Gowers, W. T.: Erdős and Arithmetic Progressions.- Graham, R. L.: Paul Erdős and Egyptian Fractions.- Györy, K.: [...]

Fields of interest

Combinatorics; Number Theory; Probability Theory and Stochastic Processes; Mathematical Logic and Formal Languages

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-39285-6

Hardcover

2013. Approx. 700 p. (Bolyai Society Mathematical Studies, Vol. 25)

\$149.00

ISBN 978-3-642-39285-6

Due: September 28, 2013

E. Zermelo, H.-D. Ebbinghaus, Universität Freiburg, Freiburg, Germany; A. Kanamori (Eds.)

Ernst Zermelo - Collected Works/ Gesammelte Werke II

Volume II/Band II - Calculus of Variations, Applied Mathematics, and Physics/Variationsrechnung, Angewandte Mathematik und Physik

Ernst Zermelo (1871-1953) is regarded as the founder of axiomatic set theory and is best-known for the first formulation of the axiom of choice.

However, his papers also include pioneering work in applied mathematics and mathematical physics. This edition of his collected papers consists of two volumes. The present Volume II covers Ernst Zermelo's work on the calculus of variations, applied mathematics, and physics. The papers are each presented in their original language together with an English translation, the versions facing each other on opposite pages. Each paper or coherent group of papers is preceded by an introductory note provided by an acknowledged expert in the field who [...]

Features

Ernst Zermelo (1871-1953) is regarded as the founder of axiomatic set theory and is best-known for the first formulation of the axiom of choice.

However, his papers also include pioneering work in applied mathematics and mathematical physics. This edition of his collected papers consists of two volumes. The present Volume II covers Ernst Zermelo's work on the calculus of variations, applied [...]

Contents

Ernst Zermelo's curriculum vitae by Heinz-Dieter Ebbinghaus.- Zermelo 1894.- Zermelo 1896a.- Boltzmann 1896.- Zermelo 1896b.- Boltzmann 1897.- Zermelo 1899a.- Zermelo s1899b.- Zermelo 1900.- Zermelo 1902a.- Zermelo s1902b.- Zermelo s1902c.- Zermelo 1902d.- Zermelo 1904a.- Hahn and Zermelo 1904.- Zermelo 1906.- Riesenfeld and Zermelo 1909.- Zermelo 1928.- Zermelo 1930c.- Zermelo 1931a.- Zermelo 1933a.- Bibliography.- Index

Fields of interest

Mathematical Logic and Foundations; Mathematical Logic and Formal Languages; Applications of Mathematics; History of Mathematics; History of Science; History of Philosophy

Target groups

Research

Type of publication

Collected works

More on www.springer.com/978-3-540-70855-1

Hardcover

2013. XXIX, 781 p. 56 illus. (Schriften der Mathematisch-naturwissenschaftlichen Klasse der Heidelberger Akademie der Wissenschaften, Vol. 23)

\$189.00

ISBN 978-3-540-70855-1

Due: September 28, 2013

P.S. Knopov, O.N. Deriyeva, National Academy of Sciences of Ukr, Kiev, Ukraine

Estimation and Control Problems for Stochastic Partial Differential Equations

Focusing on research surrounding aspects of insufficiently studied problems of estimation and optimal control of random fields, this book exposes some important aspects of those fields for systems modeled by stochastic partial differential equations. It contains many results of interest to specialists in both the theory of random fields and optimal control theory who use modern mathematical tools for resolving specific applied problems, and presents research that has not previously been covered. More generally, this book is intended for scientists, graduate, and post-graduates specializing in probability theory and mathematical statistics. The models presented describe many processes [...]

Features

Focusing on research surrounding aspects of insufficiently studied problems of estimation and optimal control of random fields, this book exposes some important aspects of those fields for systems modeled by stochastic partial differential equations. It contains many results of interest to specialists in both the theory of random fields and optimal control theory who use modern mathematical tools for [...]

Contents

1. Two Parameter Martingales and Their Properties.- 2. Stochastic Differential Equations on the Plane.- 3. Filtration and Prediction Problems for Stochastic Fields.- 4. Control Problem for Diffusion-Type Random Fields.- 5. Stochastic Processes in a Hilbert Space.- References.

Fields of interest

Partial Differential Equations; Calculus of Variations and Optimal Control; Optimization; Systems Theory, Control

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-8285-7

Hardcover

2013. X, 183 p. (Springer Optimization and Its Applications, Vol. 83)

\$109.00

ISBN 978-1-4614-8285-7

usually dispatched within 3 to 5 business days

R.W. Shonkwiler, Georgia Institute of Technology, Atlanta, USA

Finance with Monte Carlo

This text introduces upper division undergraduate/beginning graduate students in mathematics, finance, or economics, to the core topics of a beginning course in finance/financial engineering. Particular emphasis is placed on exploiting the power of the Monte Carlo method to illustrate and explore financial principles. Monte Carlo is the uniquely appropriate tool for modeling the random factors that drive financial markets and simulating their implications. The Monte Carlo method is introduced early and it is used in conjunction with the geometric Brownian motion model (GBM) to illustrate and analyze the topics covered in the remainder of the text. Placing focus on Monte Carlo methods[...]

Features

This text introduces upper division undergraduate/beginning graduate students in mathematics, finance, or economics, to the core topics of a beginning course in finance/financial engineering. Particular emphasis is placed on exploiting the power of the Monte Carlo method to illustrate and explore financial principles. Monte Carlo is the uniquely appropriate tool for modeling the random factors that drive [...]

Contents

1. Geometric Brownian Motion and the Efficient Market Hypothesis.- 2. Return and Risk.- 3. Forward and Option Contracts and their Pricing.- 4. Pricing Exotic Options.- 5. Option Trading Strategies.- 6. Alternative to GBM Prices.- 7. Kelly's Criterion.- Appendices.- A. Some Mathematical Background Topics.- B. Stochastic Calculus.- C. Convergence of the Binomial Method.- D. Variance Reduction Techniques.- E. Shell Sort.- F. Next Day Prices Program.- References.- List of Notation.- List of Algorithms.- Index.

Fields of interest

Quantitative Finance; Mathematical Modeling and Industrial Mathematics; Probability Theory and Stochastic Processes; Numerical Analysis

Target groups

Upper undergraduate

Type of publication

Undergraduate textbook

More on www.springer.com/978-1-4614-8510-0

Hardcover

2013. XIX, 250 p. 70 illus., 17 illus. in color. (Springer Undergraduate Texts in Mathematics and Technology) **\$59.99**

ISBN 978-1-4614-8510-0

usually dispatched within 3 to 5 business days

I.M. Pelayo, School of Agricultural Engineering, Barcelona, Spain

Geodesic Convexity in Graphs

Geodesic Convexity in Graphs is devoted to the study of the geodesic convexity on finite, simple, connected graphs. The first chapter includes the main definitions and results on graph theory, metric graph theory and graph path convexities. The following chapters focus exclusively on the geodesic convexity, including motivation and background, specific definitions, discussion and examples, results, proofs, exercises and open problems. The main and most studied parameters involving geodesic convexity in graphs are both the geodesic and the hull number which are defined as the cardinality of minimum geodesic and hull set, respectively. This text reviews various results, [...]

Features

Geodesic Convexity in Graphs is devoted to the study of the geodesic convexity on finite, simple, connected graphs. The first chapter includes the main definitions and results on graph theory, metric graph theory and graph path convexities. The following chapters focus exclusively on the geodesic convexity, including motivation and background, specific definitions, discussion and examples, results, [...]

Fields of interest

Graph Theory; Differential Geometry; Partial Differential Equations

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8698-5

Softcover

2013. VIII, 112 p. 41 illus. (SpringerBriefs in Mathematics) **\$54.99**

ISBN 978-1-4614-8698-5

usually dispatched within 3 to 5 business days

A. Chambolle, Ecole Polytechnique/CNRS, Palaiseau, France; M. Novaga, Università di Pisa, Pisa, Italy; E. Valdinoci, Università di Milano, Milan, Italy (Eds.)

Geometric Partial Differential Equations

This book is the outcome of a conference held at the Centro De Giorgi of the Scuola Normale di Pisa in September 2012. The aim of the conference was to discuss recent results on nonlinear partial differential equations, and more specifically geometric evolutions and reaction-diffusion equations. Particular attention was paid to self-similar solutions, such as solitons and travelling waves, asymptotic behaviour, formation of singularities and qualitative properties of solutions. These problems arise in many models from Physics, Biology, Image Processing and Applied Mathematics in general, and have attracted a lot of attention in recent years.

Features

This book is the outcome of a conference held at the Centro De Giorgi of the Scuola Normale di Pisa in September 2012. The aim of the conference was to discuss recent results on nonlinear partial differential equations, and more specifically geometric evolutions and reaction-diffusion equations. Particular attention was paid to self-similar solutions, such as solitons and travelling waves, asymptotic [...]

Contents

N. Alikakos: On the structure of phase transition maps for three or more coexisting phases.- S. Amato, G. Bellettini, M. Paolini: The nonlinear multidomain model: a new formal asymptotic analysis.- A. Chambolle, M. Goldman, M. Novaga: Existence and qualitative properties of isoperimetric sets in periodic media.- A. Chambolle, M. Morini, M. Ponsiglione: Minimizing movements and level set approach to geometric flow of nonlocal perimeters.- S. Choi, I. Kim: Homogenization with oscillatory Neumann boundary data in general domain.- D. Christodoulou: The Analysis of Shock Formation in [...]

Fields of interest

Partial Differential Equations; Calculus of Variations and Optimal Control; Optimization

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-88-7642-472-4

Softcover

2013. Approx. 400 p. (CRM Series, Vol. 15) **\$34.99**

ISBN 978-88-7642-472-4

Due: November 28, 2013

P.M. Pardalos, University of Florida, Gainesville, USA; D.-Z. Du, University of Texas, Dallas, Richardson, USA; R.L. Graham, University of California, San Diego, La Jolla, USA (Eds.)

Handbook of Combinatorial Optimization

The second edition of this 5-volume handbook is intended to be a basic yet comprehensive reference work in combinatorial optimization that will benefit newcomers and researchers for years to come. This multi-volume work deals with several algorithmic approaches for discrete problems as well as with many combinatorial problems. The editors have brought together almost every aspect of this enormous field of combinatorial optimization, an area of research at the intersection of applied mathematics, computer science, and operations research and which overlaps with many other areas such as computation complexity, computational biology, VLSI design, communications networks, and management[...]

Features

The second edition of this 7-volume handbook is intended to be a basic yet comprehensive reference work in combinatorial optimization that will benefit newcomers and researchers for years to come. This multi-volume work deals with several algorithmic approaches for discrete problems as well as with many combinatorial problems. The editors have brought together almost every aspect of this enormous field of [...]

Contents

Introduction.- Part 1. General Methodology.- Analysis of Greedy Approximations.- Guillotine Partition in Geometric Optimization.- Mixed-Integer Nonlinear Optimization in Process Synthesis.- Connection between Nonlinear Programming and Discrete Optimization.- Interior Point Methods for Combinatorial Optimization.- Fractional Combinatorial Optimization.- Reformulation-Linearization Techniques for Discrete Optimization Problems.- Grobner Bases in Integer Programming.- Dynamical System Approaches to Combinatorial Optimization.- Semidefinite Relaxation, Multivariate Norm Distribution and[...]

Fields of interest

Optimization; Combinatorics

Target groups

Research

Type of publication

Reference work

More on www.springer.com/978-1-4419-7996-4

2013. XXI, 3409 p. 685 illus., 169 illus. in color. eReference.

\$3,400.00

ISBN 978-1-4419-7997-1

Online orders shipping within 2-3 days.

A. Terras, University of California at San Diego, La Jolla, USA

Harmonic Analysis on Symmetric Spaces—Euclidean Space, the Sphere, and the Poincaré Upper Half-Plane

This unique text is an introduction to harmonic analysis on the simplest symmetric spaces, namely Euclidean space, the sphere, and the Poincaré upper half plane. This book is intended for beginning graduate students in mathematics or researchers in physics or engineering. Written with an informal style, the book places an emphasis on motivation, concrete examples, history, and, above all, applications in mathematics, statistics, physics, and engineering. Many corrections and updates have been incorporated in this new edition. Updates include discussions of P. Sarnak and others' work on quantum chaos, the work of T. Sunada, Marie-France Vignéras, Carolyn Gordon, and others on Mark[...]

Features

This unique text is an introduction to harmonic analysis on the simplest symmetric spaces, namely Euclidean space, the sphere, and the Poincaré upper half plane. This book is intended for beginning graduate students in mathematics or researchers in physics or engineering. Written with an informal style, the book places an emphasis on motivation, concrete examples, history, and, above all, applications in [...]

Contents

Chapter 1 Flat Space. Fourier Analysis on \mathbb{R}^m .- 1.1 Distributions or Generalized Functions.- 1.2 Fourier Integrals.- 1.3 Fourier Series and the Poisson Summation Formula.- 1.4 Mellin Transforms, Epstein and Dedekind Zeta Functions.- 1.5 Finite Symmetric Spaces, Wavelets, Quasicrystals, Weyl's Criterion for Uniform Distribution.- Chapter 2 A Compact Symmetric Space--The Sphere.- 2.1 Fourier Analysis on the Sphere.- 2.2 $O(3)$ and \mathbb{R}^3 . The Radon Transform.- Chapter 3 The Poincaré Upper Half-Plane.- 3.1 Hyperbolic Geometry.- 3.2 Harmonic Analysis on H .- 3.3 Fundamental Domains for Discrete[...]

Fields of interest

Abstract Harmonic Analysis; Fourier Analysis; Group Theory and Generalizations; Topological Groups, Lie Groups; Functions of a Complex Variable; Special Functions

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-1-4614-7971-0

Hardcover

2013. XVII, 413 p. 83 illus., 32 illus. in color.

\$79.99

ISBN 978-1-4614-7971-0

usually dispatched within 3 to 5 business days

S.S. Dragomir, Victoria University, Melbourne, Australia; Braamfontein, South Africa

Inequalities for the Numerical Radius of Linear Operators in Hilbert Spaces

Aimed toward researchers, postgraduate students, and scientists in linear operator theory and mathematical inequalities, this self-contained monograph focuses on numerical radius inequalities for bounded linear operators on complex Hilbert spaces for the case of one and two operators. Students at the graduate level will learn some essentials that may be useful for reference in courses in functional analysis, operator theory, differential equations, and quantum computation, to name several. Chapter 1 presents fundamental facts about the numerical range and the numerical radius of bounded linear operators in Hilbert spaces. Chapter 2 illustrates recent results obtained concerning[...]

Features

Aimed toward researchers, postgraduate students, and scientists in linear operator theory and mathematical inequalities, this self-contained monograph focuses on numerical radius inequalities for bounded linear operators on complex Hilbert spaces for the case of one and two operators. Students at the graduate level will learn some essentials that may be useful for reference in courses in functional [...]

Contents

1. Introduction.- 2. Inequalities for One Operator.- 3. Inequalities for Two Operators.

Fields of interest

Operator Theory; Ordinary Differential Equations; Analysis

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-01447-0

Softcover

2013. X, 120 p. (SpringerBriefs in Mathematics)

\$54.99

ISBN 978-3-319-01447-0

usually dispatched within 3 to 5 business days

J.P. Pinasco, Universidad de Buenos Aires, Buenos Aires, Argentina

Lyapunov-type Inequalities

With Applications to Eigenvalue Problems

The eigenvalue problems for quasilinear and nonlinear operators present many differences with the linear case, and a Lyapunov inequality for quasilinear resonant systems showed the existence of eigenvalue asymptotics driven by the coupling of the equations instead of the order of the equations. For $p=2$, the coupling and the order of the equations are the same, so this cannot happen in linear problems. Another striking difference between linear and quasilinear second order differential operators is the existence of Lyapunov-type inequalities in \mathbb{R}^n when $p > n$. Since the linear case corresponds to $p=2$, for the usual Laplacian there exists a Lyapunov inequality only for one-dimensional[...]

Features

The eigenvalue problems for quasilinear and nonlinear operators present many differences with the linear case, and a Lyapunov inequality for quasilinear resonant systems showed the existence of eigenvalue asymptotics driven by the coupling of the equations instead of the order of the equations. For $p=2$, the coupling and the order of the equations are the same, so this cannot happen in linear problems. [...]

Contents

A short history of Lyapunov inequality.- Lyapunov inequality for p -laplacian operators.- Generalizations.- Lyapunov type inequalities in \mathbb{R}^n .

Fields of interest

Ordinary Differential Equations; Several Complex Variables and Analytic Spaces; Difference and Functional Equations

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8522-3

Softcover

2013. XIII, 131 p. (SpringerBriefs in Mathematics)

\$54.99

ISBN 978-1-4614-8522-3

usually dispatched within 3 to 5 business days

E. Rosazza Gianin, Università di Milano Bicocca, Milano, Italy; C. Sgarra, Politecnico di Milano, Milano, Italy

Mathematical Finance: Theory Review and Exercises

From Binomial Model to Risk Measures

The book collects over 120 exercises on different subjects of Mathematical Finance, including Option Pricing, Risk Theory, and Interest Rate Models. Many of the exercises are solved, while others are only proposed. Every chapter contains an introductory section illustrating the main theoretical results necessary to solve the exercises. The book is intended as an exercise textbook to accompany graduate courses in mathematical finance offered at many universities as part of degree programs in Applied and Industrial Mathematics, Mathematical Engineering, and Quantitative Finance.

Features

The book collects over 120 exercises on different subjects of Mathematical Finance, including Option Pricing, Risk Theory, and Interest Rate Models. Many of the exercises are solved, while others are only proposed. Every chapter contains an introductory section illustrating the main theoretical results necessary to solve the exercises. The book is intended as an exercise textbook to accompany graduate courses [...]

Contents

1 Short review of Probability and of Stochastic Processes.- 2 Portfolio Optimization in Discrete time Models.- 3 Binomial Model for Option Pricing.- 4 Absence of arbitrage and Completeness of market models.- 5 Itô's Formula and Stochastic Differential Equations.- 6 Partial Differential Equations in Finance.- 7 Black-Scholes model for Option Pricing and Hedging Strategies.- 8 American Options.- 9 Exotic Options.- 10 Interest Rate Models.- 11 Pricing Models beyond Black-Scholes.- 12 Risk Measures: Value at Risk and beyond.

Fields of interest

Probability Theory and Stochastic Processes; Finance / Banking; Statistics for Business, Economics, Mathematical Finance, Insurance

Target groups

Graduate

Type of publication

Undergraduate textbook

More on www.springer.com/978-3-319-01356-5

Softcover

2013. X, 278 p. (La Matematica per il 3+2, Vol. 70)

\$59.99

ISBN 978-3-319-01356-5

Due: September 30, 2013

G. Ledder, University of Nebraska-Lincoln, Lincoln, USA

Mathematics for the Life Sciences

Calculus, Modeling, Probability, and Dynamical Systems

Mathematics for the Life Sciences provides present and future biologists with the mathematical concepts and tools needed to understand and use mathematical models and read advanced mathematical biology books. It presents mathematics in biological contexts, focusing on the central mathematical ideas, and providing detailed explanations. The author assumes no mathematics background beyond algebra and precalculus. Calculus is presented as a one-chapter primer that is suitable for readers who have not studied the subject before, as well as readers who have taken a calculus course and need a review. This primer is followed by a novel chapter on mathematical modeling that begins[...]

Features

Mathematics for the Life Sciences provides present and future biologists with the mathematical concepts and tools needed to understand and use mathematical models and read advanced mathematical biology books. It presents mathematics in biological contexts, focusing on the central mathematical ideas, and providing detailed explanations. The author assumes no mathematics background beyond algebra and [...]

Contents

A Brief Summary of Calculus.- Mathematical Modeling.- Probability Distributions.- Working with Probability.- Dynamics of Single Populations.- Discrete Dynamical Systems.- Continuous Dynamical Systems.- Index.

Fields of interest

Mathematical and Computational Biology; Life Sciences (general); Dynamical Systems and Ergodic Theory

Target groups

Lower undergraduate

Type of publication

Undergraduate textbook

More on www.springer.com/978-1-4614-7275-9

Hardcover

2013. XX, 431 p. 109 illus. (Springer Undergraduate Texts in Mathematics and Technology)

\$69.99

ISBN 978-1-4614-7275-9

usually dispatched within 3 to 5 business days

P. Paule, Johannes Kepler University, Linz, Austria (Ed.)

Mathematics, Computer Science and Logic - A Never Ending Story

The Bruno Buchberger Festschrift

This book presents four mathematical essays which explore the foundations of mathematics and related topics ranging from philosophy and logic to modern computer mathematics. While connected to the historical evolution of these concepts, the essays place strong emphasis on developments still to come. The book originated in a 2002 symposium celebrating the work of Bruno Buchberger, Professor of Computer Mathematics at Johannes Kepler University, Linz, Austria, on the occasion of his 60th birthday. Among many other accomplishments, Professor Buchberger in 1985 was the founding editor of the Journal of Symbolic Computation; the founder of the Research Institute for Symbolic Computation[...]

Features

This book presents four mathematical essays which explore the foundations of mathematics and related topics ranging from philosophy and logic to modern computer mathematics. While connected to the historical evolution of these concepts, the essays place strong emphasis on developments still to come. The book originated in a 2002 symposium celebrating the work of Bruno Buchberger, Professor of Computer [...]

Contents

Preface.- Henk Barendregt: Foundations of Mathematics from the Perspective of Computer Verification.- Manfred Broy: On the Role of Logic and Algebra in Software Engineering.- Stephen Wolfram: New Directions in the Foundations of Mathematics (2002).- Doron Zeilberger: Towards a Symbolic Computational Philosophy (and Methodology!) for Mathematics.

Fields of interest

Algorithms; Mathematical Logic and Foundations; Mathematical Software; Software Engineering / Programming and Operating Systems; Theory of Computation

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-319-00965-0

Hardcover

2013. VII, 113 p. 35 illus.

\$109.00

ISBN 978-3-319-00965-0

usually dispatched within 3 to 5 business days

A.M. Bigatti, Università degli Studi di Genova, Genova, Italy; P. Gimenez, University of Valladolid, Valladolid, Spain; E. Sáenz-de-Cabezón, University of La Rioja, Logroño, Spain (Eds.)

Monomial Ideals, Computations and Applications

This work covers three important aspects of monomial ideals in the three chapters "Stanley decompositions" by Jürgen Herzog, "Edge ideals" by Adam Van Tuyl and "Local cohomology" by Josep Àlvarez Montaner. The chapters, written by top experts, include computer tutorials that emphasize the computational aspects of the respective areas. Monomial ideals and algebras are, in a sense, among the simplest structures in commutative algebra and the main objects of combinatorial commutative algebra. Also, they are of major importance for at least three reasons. Firstly, Gröbner basis theory allows us to treat certain problems on general polynomial ideals by means of monomial ideals. Secondly,[...]

Features

This work covers three important aspects of monomial ideals in the three chapters "Stanley decompositions" by Jürgen Herzog, "Edge ideals" by Adam Van Tuyl and "Local cohomology" by Josep Àlvarez Montaner. The chapters, written by top experts, include computer tutorials that emphasize the computational aspects of the respective areas. Monomial ideals and algebras are, in a sense, among the simplest structures [...]

Contents

A survey on Stanley depth.- Stanley decompositions using CoCoA.- A beginner's guide to edge and cover ideals.- Edge ideals using Macaulay2.- Local cohomology modules supported on monomial ideals.- Local Cohomology using Macaulay2.

Fields of interest

Algebra

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-642-38741-8

Softcover

2013. XI, 194 p. 42 illus. (Lecture Notes in Mathematics, Vol. 2083)

\$59.99

ISBN 978-3-642-38741-8

usually dispatched within 3 to 5 business days

L.C. Ciungu, University of Iowa, Iowa City, USA

Non-commutative Multiple-Valued Logic Algebras

This monograph provides a self-contained and easy-to-read introduction to non-commutative multiple-valued logic algebras; a subject which has attracted much interest in the past few years because of its impact on information science, artificial intelligence and other subjects. A study of the newest results in the field, the monograph includes treatment of pseudo-BCK algebras, pseudo-hoops, residuated lattices, bounded divisible residuated lattices, pseudo-MTL algebras, pseudo-BL algebras and pseudo-MV algebras. It provides a fresh perspective on new trends in logic and algebras in that algebraic structures can be developed into fuzzy logics which connect quantum mechanics,[...]

Features

This monograph provides a self-contained and easy-to-read introduction to non-commutative multiple-valued logic algebras; a subject which has attracted much interest in the past few years because of its impact on information science, artificial intelligence and other subjects. A study of the newest results in the field, the monograph includes treatment of pseudo-BCK algebras, pseudo-hoops, residuated [...]

Contents

Pseudo-BCK algebras.- Pseudo-hoops.- Residuated lattices.- Other non-commutative multiple-valued logic algebras.- Classes of non-commutative residuated structures.- States on multiple-valued logic algebras.- Measures on pseudo-BCK algebras.- Generalized states on residuated structures.- Pseudo-hoops with internal states.

Fields of interest

Mathematical Logic and Foundations; Order, Lattices, Ordered Algebraic Structures; Probability Theory and Stochastic Processes; Measure and Integration

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01588-0

Hardcover

2014. XIV, 276 p. 8 illus. (Springer Monographs in Mathematics)

\$129.00

ISBN 978-3-319-01588-0

usually dispatched within 3 to 5 business days

A. Klenke

Probability Theory

A Comprehensive Course

This second edition of the popular textbook contains a comprehensive course in modern probability theory. Overall, probabilistic concepts play an increasingly important role in mathematics, physics, biology, financial engineering and computer science. They help us in understanding magnetism, amorphous media, genetic diversity and the perils of random developments at financial markets, and they guide us in constructing more efficient algorithms. To address these concepts, the title covers a wide variety of topics, many of which are not usually found in introductory textbooks, such as: • limit theorems for sums of random variables • martingales • percolation • Markov chains and electrical[...]

Features

This second edition of the popular textbook contains a comprehensive course in modern probability theory. Overall, probabilistic concepts play an increasingly important role in mathematics, physics, biology, financial engineering and computer science. They help us in understanding magnetism, amorphous media, genetic diversity and the perils of random developments at financial markets, and they guide us in [...]

Contents

Basic Measure Theory.- Independence.- Generating Functions.- The Integral.- Moments and Laws of Large Numbers.- Convergence Theorems.- L_p -Spaces and the Radon-Nikodym Theorem.- Conditional Expectations.- Martingales.- Optional Sampling Theorems.- Martingale Convergence Theorems and Their Applications.- Backwards Martingales and Exchangeability.- Convergence of Measures.- Probability Measures on Product Spaces.- Characteristic Functions and the Central Limit Theorem.- Infinitely Divisible Distributions.- Markov Chains.- Convergence of Markov Chains.- Markov Chains and Electrical[...]

Fields of interest

Probability Theory and Stochastic Processes; Measure and Integration; Dynamical Systems and Ergodic Theory; Functional Analysis; Statistical Physics, Dynamical Systems and Complexity

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-1-4471-5360-3

Softcover

2014. XII, 638 p. 46 illus., 20 illus. in color. (Universitext)
\$89.99

ISBN 978-1-4471-5360-3

usually dispatched within 3 to 5 business days

G. Alsmeyer, Westphalian Wilhelms University Münster, Münster, Germany; M. Löwe, Westphalian Wilhelms University Münster, Münster, Germany (Eds.)

Random Matrices and Iterated Random Functions

Münster, October 2011

Random Matrices are one of the major research areas in modern probability theory, due to their prominence in many different fields such as nuclear physics, statistics, telecommunication, free probability, non-commutative geometry, and dynamical systems. A great deal of recent work has focused on the study of spectra of large random matrices on the one hand and on iterated random functions, especially random difference equations, on the other. However, the methods applied in these two research areas are fairly dissimilar. Motivated by the idea that tools from one area could potentially also be helpful in the other, the volume editors have selected contributions that present results[...]

Features

Random Matrices are one of the major research areas in modern probability theory, due to their prominence in many different fields such as nuclear physics, statistics, telecommunication, free probability, non-commutative geometry, and dynamical systems. A great deal of recent work has focused on the study of spectra of large random matrices on the one hand and on iterated random functions, especially random [...]

Contents

E. Le Page: Tails of a stationary probability measure for an affine stochastic recursion on the line.- Yv. Guivarc'h: On homogeneity at infinity of stationary measures for affine stochastic recursions.- M. Stolz: Limit theorems for random elements of the compact classical groups.- T. Kriecherbauer: Universality of local eigenvalue statistics.- R. Speicher: Asymptotic eigenvalue distribution of random matrices and free stochastic analysis.- M. Peigné: Conditioned random walk in Weyl chambers and renewal theory in a cone.- D. Buraczewski: The linear stochastic equation $R =_d \sum_{i=1}^N R_i$ [...]

Fields of interest

Probability Theory and Stochastic Processes; Functional Analysis

Target groups

Graduate

Type of publication

Proceedings

More on www.springer.com/978-3-642-38805-7

Hardcover

2013. VIII, 265 p. 24 illus., 15 illus. in color. (Springer Proceedings in Mathematics & Statistics, Vol. 53)

\$139.00

ISBN 978-3-642-38805-7

usually dispatched within 3 to 5 business days

G. Philippis, Hausdorff Center for Mathematics, Bonn, Germany

Regularity of Optimal Transport Maps and Applications

In this thesis, we study the regularity of optimal transport maps and its applications to the semi-geostrophic system. The first two chapters survey the known theory, in particular there is a self-contained proof of Brenier' theorem on existence of optimal transport maps and of Caffarelli's Theorem on Holder continuity of optimal maps. In the third and fourth chapter we start investigating Sobolev regularity of optimal transport maps, while in Chapter 5 we show how the above mentioned results allows to prove the existence of Eulerian solution to the semi-geostrophic equation. In Chapter 6 we prove partial regularity of optimal maps with respect to a generic cost functions (it is well[...])

Features

In this thesis, we study the regularity of optimal transport maps and its applications to the semi-geostrophic system. The first two chapters survey the known theory, in particular there is a self-contained proof of Brenier' theorem on existence of optimal transport maps and of Caffarelli's Theorem on Holder continuity of optimal maps. In the third and fourth chapter we start investigating Sobolev regularity [...]

Contents

Introduction.- 1 An overview on Optimal Transportation.- 2 The Monge-Ampère Equation.- 3 Sobolev regularity of solutions to the Monge-Ampère equation.- 4 Second order stability for the Monge-Ampère equation and applications.- 5 The semigeostrophic equations.- 6 Partial regularity of optimal transport maps.- A. Properties of convex functions.- B. A proof of John Lemma.- Bibliography.

Fields of interest

Calculus of Variations and Optimal Control; Optimization

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-88-7642-456-4

Softcover

2013. Approx. 190 p. (Theses (Scuola Normale Superiore), Vol. 17)

\$29.99

ISBN 978-88-7642-456-4

Due: September 28, 2013

D.E. Edmunds, University of Sussex, Brighton, United Kingdom;
W.D. Evans

Representations of Linear Operators Between Banach Spaces

The book deals with the representation in series form of compact linear operators acting between Banach spaces, and provides an analogue of the classical Hilbert space results of this nature that have their roots in the work of D. Hilbert, F. Riesz and E. Schmidt. The representation involves a recursively obtained sequence of points on the unit sphere of the initial space and a corresponding sequence of positive numbers that correspond to the eigenvectors and eigenvalues of the map in the Hilbert space case. The lack of orthogonality is partially compensated by the systematic use of polar sets. There are applications to the p-Laplacian and similar nonlinear partial differential[...]

Features

The book deals with the representation in series form of compact linear operators acting between Banach spaces, and provides an analogue of the classical Hilbert space results of this nature that have their roots in the work of D. Hilbert, F. Riesz and E. Schmidt. The representation involves a recursively obtained sequence of points on the unit sphere of the initial space and a corresponding sequence of [...]

Contents

1 Preliminaries.- 2 Representation of compact linear operators.- 3 Representation of bounded linear operators.

Fields of interest

Operator Theory; Partial Differential Equations

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-0348-0641-1

Hardcover

2013. XI, 152 p. 1 illus. in color. (Operator Theory: Advances and Applications, Vol. 238)

\$109.00

ISBN 978-3-0348-0641-1

usually dispatched within 3 to 5 business days

R. Dalang, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland; M. Dozzi, F. Russo, ENSTA ParisTech, Palaiseau, France (Eds.)

Seminar on Stochastic Analysis, Random Fields and Applications VII

Centro Stefano Franscini, Ascona, May 2011

This volume contains refereed research or review articles presented at the 7th Seminar on Stochastic Analysis, Random Fields and Applications which took place at the Centro Stefano Franscini (Monte Verità) in Ascona, Switzerland, in May 2011. The seminar focused mainly on: • stochastic (partial) differential equations, especially with jump processes, construction of solutions and approximations - Malliavin calculus and Stein methods, and other techniques in stochastic analysis, especially chaos representations and convergence, and applications to models of interacting particle systems - stochastic methods in financial models, especially models for power markets or for risk analysis.[...]

Features

This book presents refereed research or review articles presented at the 7th Seminar on Stochastic Analysis, Random Fields and Applications, which was held at the Centro Stefano Franscini (Monte Verità) in Ascona, Switzerland, in May 2011. The seminar mainly focused on: • stochastic (partial) differential equations, especially with regard to jump processes, construction of solutions and [...]

Contents

Foreword.- Public lecture by N. Bouleau, Can there be excessive mathematization of the world?.- Part I: Stochastic analysis and random fields R. Balan, Recent advances related to SPDEs with fractional noise.- G. Di Nunno, S.Sjursen, On chaos representation and orthogonal polynomials for the doubly stochastic Poisson process.- R. Eden, F. Viens, General upper and lower tail estimates using Malliavin calculus and Stein's equations.- B. Ferrario, Uniqueness and absolute continuity for semilinear SPDE's.- I. Gyöngy, P.R. Stinga, Rate of convergence of Wong-Zakai approximations for SPDEs.- [...]

Fields of interest

Probability Theory and Stochastic Processes; Partial Differential Equations; Analysis

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-0348-0544-5

Hardcover

2013. XI, 469 p. 28 illus., 22 illus. in color. (Progress in Probability, Vol. 67)

\$169.00

ISBN 978-3-0348-0544-5

usually dispatched within 3 to 5 business days

Y.J. Cho, Gyeongsang National University, Chinju, Korea, Republic of (South Korea); T.M. Rassias, National Technical University of Athens, Athens, Greece; R. Saadati, Iran University of Science and Technology, Behshahr, Iran

Stability of Functional Equations in Random Normed Spaces

This book discusses the rapidly developing subject of mathematical analysis that deals primarily with stability of functional equations in generalized spaces. The fundamental problem in this subject was proposed by Stan M. Ulam in 1940 for approximate homomorphisms. The seminal work of Donald H. Hyers in 1941 and that of Themistocles M. Rassias in 1978 have provided a great deal of inspiration and guidance for mathematicians worldwide to investigate this extensive domain of research. The book presents a self-contained survey of recent and new results on topics including basic theory of random normed spaces and related spaces; stability theory for new function equations in random normed[...]

Features

This book discusses the rapidly developing subject of mathematical analysis that deals primarily with stability of functional equations in generalized spaces. The fundamental problem in this subject was proposed by Stan M. Ulam in 1940 for approximate homomorphisms. The seminal work of Donald H. Hyers in 1941 and that of Themistocles M. Rassias in 1978 have provided a great deal of inspiration and guidance [...]

Contents

Preface.- 1. Preliminaries.- 2. Generalized Spaces.- 3. Stability of Functional Equations in Random Normed Spaces Under Special t-norms.- 4. Stability of Functional Equations in Random Normed Spaces Under Arbitrary t-norms.- 5. Stability of Functional Equations in random Normed Spaces via Fixed Point Method.- 6. Stability of Functional Equations in Non-Archimedean Random Spaces.- 7. Random Stability of Functional Equations Related to Inner Product Spaces.- 8. Random Banach Algebras and Stability Results.

Fields of interest

Functional Analysis; Optimization; Partial Differential Equations

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-8476-9

Hardcover

2013. XIX, 246 p. (Springer Optimization and Its Applications, Vol. 86)

\$109.00

ISBN 978-1-4614-8476-9

usually dispatched within 3 to 5 business days

D. Lima Gonçalves, Universidade de São Paulo, São Paulo, Brazil;
J. Guaschi, Normandie Université, Caen Cedex, France

The Classification of the Virtually Cyclic Subgroups of the Sphere Braid Groups

This manuscript is devoted to classifying the isomorphism classes of the virtually cyclic subgroups of the braid groups of the 2-sphere. As well as enabling us to understand better the global structure of these groups, it marks an important step in the computation of the K-theory of their group rings. The classification itself is somewhat intricate, due to the rich structure of the finite subgroups of these braid groups, and is achieved by an in-depth analysis of their group-theoretical and topological properties, such as their centralisers, normalisers and cohomological periodicity. Another important aspect of our work is the close relationship of the braid groups with mapping class [...]

Features

This manuscript is devoted to classifying the isomorphism classes of the virtually cyclic subgroups of the braid groups of the 2-sphere. As well as enabling us to understand better the global structure of these groups, it marks an important step in the computation of the K-theory of their group rings. The classification itself is somewhat intricate, due to the rich structure of the finite subgroups of these [...]

Contents

Introduction and statement of the main results.- Virtually cyclic groups: generalities, reduction and the mapping class group.- Realisation of the elements of $V_1(n)$ and $V_2(n)$ in $B_n(S^2)$.- Appendix: The subgroups of the binary polyhedral groups.- References.

Fields of interest

Group Theory and Generalizations; Algebraic Topology; Algebra

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-00256-9

Softcover

2013. X, 102 p. 26 illus. (SpringerBriefs in Mathematics)

\$49.99

ISBN 978-3-319-00256-9

usually dispatched within 3 to 5 business days

E. Tonti, University of Trieste, Trieste, Italy

The Mathematical Structure of Classical and Relativistic Physics

A General Classification Diagram

The theories describing seemingly unrelated areas of physics have surprising analogies that have aroused the curiosity of scientists and motivated efforts to identify reasons for their existence. Comparative study of physical theories has revealed the presence of a common topological and geometric structure. The Mathematical Structure of Classical and Relativistic Physics is the first book to analyze this structure in depth, thereby exposing the relationship between (a) global physical variables and (b) space and time elements such as points, lines, surfaces, instants, and intervals. Combining this relationship with the inner and outer orientation of space and time allows one to [...]

Features

The theories describing seemingly unrelated areas of physics have surprising analogies that have aroused the curiosity of scientists and motivated efforts to identify reasons for their existence. Comparative study of physical theories has revealed the presence of a common topological and geometric structure. The Mathematical Structure of Classical and Relativistic Physics is the first book to [...]

Contents

1 Introduction.- Part I Analysis of variables and equations.- 2 Terminology revisited.- 3 Space and time elements and their orientation.- 4 Cell complexes.- 5 Analysis of physical variables.- 6 Analysis of physical equations.- 7 Algebraic topology.- 8 The birth of the classification diagrams.- Part II Analysis of physical theories.- 9 Particle dynamics.- 10 Electromagnetism.- 11 Mechanics of deformable solids.- 12 Mechanics of fluids.- 13 Other physical theories.- Part III Advanced analysis.- 14 General structure of the diagrams.- 15 The mathematical structure.- Part IV Appendices.- A [...]

Fields of interest

Mathematical Physics; Mathematical Methods in Physics; Partial Differential Equations; Algebraic Topology; Theoretical, Mathematical and Computational Physics; Applications of Mathematics

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-1-4614-7421-0

Hardcover

2013. XXXVI, 514 p. 164 illus. (Modeling and Simulation in Science, Engineering and Technology)

\$149.00

ISBN 978-1-4614-7421-0

usually dispatched within 3 to 5 business days

R.L. Graham, University of California, San Diego, La Jolla, USA;
J. Nešetřil, Charles University, Prague, Czech Republic; S. Butler, Iowa State University, Ames, USA (Eds.)

The Mathematics of Paul Erdős I

This is the most comprehensive survey of the mathematical life of the legendary Paul Erdős (1913-1996), one of the most versatile and prolific mathematicians of our time. For the first time, all the main areas of Erdős' research are covered in a single project. Because of overwhelming response from the mathematical community, the project now occupies over 1000 pages, arranged into two volumes. These volumes contain both high level research articles as well as key articles that survey some of the cornerstones of Erdős' work, each written by a leading world specialist in the field. A special chapter "Early Days", rare photographs, and art related to Erdős complement this striking [...]

Features

This is the most comprehensive survey of the mathematical life of the legendary Paul Erdős (1913-1996), one of the most versatile and prolific mathematicians of our time. For the first time, all the main areas of Erdős' research are covered in a single project. Because of overwhelming response from the mathematical community, the project now occupies over 1000 pages, arranged into two volumes. These volumes [...]

Contents

VOLUME I.- Paul Erdős — Life and Work.- Paul Erdős Magic.- Part I Early Days.- Introduction.- Some of My Favorite Problems and Results.- 3 Encounters with Paul Erdős.- 4 Did Erdős Save Western Civilization?.- Integers Uniquely Represented by Certain Ternary Forms.- Did Erdős Save Western Civilization?.- Encounters with Paul Erdős.- On Cubic Graphs of Girth at Least Five.- Part II Number Theory.- Introduction.- Cross-disjoint Pairs of Clouds in the Interval Lattice.- Classical Results on Primitive and Recent Results on Cross-Primitive Sequences.- Dense Difference Sets and their [...]

Fields of interest

Mathematics (general); Number Theory; Convex and Discrete Geometry; Probability Theory and Stochastic Processes

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7257-5

Hardcover

2013. XIX, 563 p. 44 illus., 2 illus. in color.

\$149.00

ISBN 978-1-4614-7257-5

usually dispatched within 3 to 5 business days

J. Nešetřil, Charles University, Prague, Czech Republic; M. Pellegrini, Consiglio Nazionale delle Ricerche (CNR), Pisa, Italy (Eds.)

The Seventh European Conference on Combinatorics, Graph Theory and Applications

EuroComb 2013

In the tradition of EuroComb'01 (Barcelona), Eurocomb'03 (Prague), EuroComb'05 (Berlin), Eurocomb'07 (Seville), Eurocomb'09 (Bordeaux), and Eurocomb'11 (Budapest), this volume covers recent advances in combinatorics and graph theory including applications in other areas of mathematics, computer science and engineering. Topics include, but are not limited to: Algebraic combinatorics, combinatorial geometry, combinatorial number theory, combinatorial optimization, designs and configurations, enumerative combinatorics, extremal combinatorics, ordered sets, random methods, topological combinatorics.

Features

In the tradition of EuroComb'01 (Barcelona), Eurocomb'03 (Prague), EuroComb'05 (Berlin), Eurocomb'07 (Seville), Eurocomb'09 (Bordeaux), and Eurocomb'11 (Budapest), this volume covers recent advances in combinatorics and graph theory including applications in other areas of mathematics, computer science and engineering. Topics include, but are not limited to: Algebraic combinatorics, combinatorial geometry, [...]

Contents

90 to 100 extended abstracts accepted by the Program Committee of Eurocomb 2013, formed by 24 experts in the field, for presentation at the forthcoming Conference Eurocomb 2013, Pisa, September 3-9, 2013.

Fields of interest

Combinatorics; Graph Theory

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-88-7642-474-8

Softcover

2013. Approx. 600 p. (CRM Series, Vol. 16)

\$34.99

ISBN 978-88-7642-474-8

Due: October 29, 2013

Medicine

Y.-C. Lin, Department of Anaesthesia (Pediatrics), Boston, USA; E.S.-Z. Hsu (Eds.)

Acupuncture for Pain Management

Acupuncture for Pain Management is intended as the premier resource for learning the fundamentals of the art of medical acupuncture. Edited by top pain medicine specialists at Harvard and UCLA, and based on their popular annual workshop at the American Society for Anesthesiologists, the book is the perfect synthesis of Western and Chinese medicine. Anesthesiologists, pain medicine specialists, primary care physicians, osteopaths, neurologists, psychiatrists, physical medicine and rehabilitation specialists, and other health professionals looking to add acupuncture to their repertoire will benefit from the concise and practical approach of the book. Features: Each individual meridian [...]

Features

Acupuncture for Pain Management is intended as the premier resource for learning the fundamentals of the art of medical acupuncture. Edited by top pain medicine specialists at Harvard and UCLA, and based on their popular annual workshop at the American Society for Anesthesiologists, the book is the perfect synthesis of Western and Chinese medicine. Anesthesiologists, pain medicine [...]

Contents

Part I: General Consideration.- 1. History of Acupuncture.- 2. Basic Theories of Traditional Chinese Medicine.- 3. Pattern Discrimination in Traditional Chinese Medicine (TCM).- 4. Mechanisms of Acupuncture Analgesia.- 5. Common Acupuncture Practices.- 6. Peri-Operative Acupuncture.- 7. Acupuncture Pain Research: Quantitative and Qualitative.- 8. Auricular Acupuncture.- Part II: Acupuncture Channels.- 9. Acupuncture Qi Flow and Points Measurement.- 10. Hand Tai Yin Lung Meridian.- 11. Hand Yang Ming Large Intestine Meridian.- 12. Foot Yang Ming Stomach Meridian.- 13. Foot Tai Yin Spleen [...]

Fields of interest

Anesthesiology; Pain Medicine; Complementary & Alternative Medicine; Primary Care Medicine

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-5274-4

Softcover

2014. XIV, 276 p. 54 illus., 49 illus. in color.

\$79.99

ISBN 978-1-4614-5274-4

usually dispatched within 3 to 5 business days

O. Akin (Ed.)

Atlas of Gynecologic Oncology Imaging

This book provides a comprehensive visual review of pathologic disease variations of the five main types of gynecologic cancers: ovarian, endometrial, cervical, vaginal, and vulvar. Through the use of cross-sectional imaging modalities, including computed tomography, magnetic resonance imaging, ultrasound, and positron emission tomography, it depicts normal anatomy as well as common gynecological tumors. For each type of cancer, aspects such as primary staging, recurrence patterns, and findings from different yet complementary imaging modalities are explored. Atlas of Gynecologic Oncology Imaging presents a coherent perspective of the roles of standard and cutting-edge imaging [...]

Features

This book provides a comprehensive visual review of pathologic disease variations of the five main types of gynecologic cancers: ovarian, endometrial, cervical, vaginal, and vulvar. Through the use of cross-sectional imaging modalities, including computed tomography, magnetic resonance imaging, ultrasound, and positron emission tomography, it depicts normal anatomy as well as common gynecological tumors. For [...]

Contents

Ovarian Cancer.- Endometrial Cancer.- Cervical Cancer.- Vaginal Cancer.- Vulvar Cancer.- PET-CT Imaging in Gynecologic Oncology.- Image-Guided Intervention in Gynecologic Oncology.

Fields of interest

Imaging / Radiology; Diagnostic Radiology; Oncology

Target groups

Professional/practitioner

Type of publication

Atlas

More on www.springer.com/978-1-4614-7211-7

Hardcover

2014. IX, 208 p. 155 illus., 51 illus. in color. (Atlas of Oncology Imaging)

\$139.00

ISBN 978-1-4614-7211-7

usually dispatched within 3 to 5 business days

S. Wu, Shengjing Hospital, Shenyang, China (P.R.); Y. Fan, Shengjing Hospital, Shenyang, China (P.R.); Y. Tian, Shengjing Hospital, Shenyang, China (P.R.) (Eds.)

Atlas of Single-Incision Laparoscopic Operations in General Surgery

This atlas presents an extensive collection of single-incision laparoscopic operations in general surgery performed from 2008 to 2013 in Shengjing Hospital of China Medical University. 2000 operations are reported in it. All the figures in it were collected using real time recordings of the operations which will be particularly interesting to the readers. In each specific surgery, authors provide its key surgical steps, complications and management and contraindication. This atlas is intended for clinical surgeons who can evolve these operations soon after reading about them. Patients will also benefit from this book because of the combination of minimal invasiveness and cosmetic [...]

Features

This atlas presents an extensive collection of single-incision laparoscopic operations in general surgery performed from 2008 to 2013 in Shengjing Hospital of China Medical University. 2000 operations are reported in it. All the figures in it were collected using real time recordings of the operations which will be particularly interesting to the readers. In each specific surgery, authors provide its key [...]

Contents

Sketch of Single-Incision Laparoscopic Surgery (SILS).- Esophageal Surgery.- Gastrointestinal Surgery.- Colorectal Surgery.- Hepatobiliary Surgery.- Pancreatic Surgery.- Splenic Surgery.- Hernia Surgery.- Breast Surgery: Breast Conserving Radical Mastectomy with Single-Incision Endoscopic Axillary Dissection.- Thyroid Surgery: Single-Port Access Transaxillary Totally Endoscopic Thyroidectomy.- Single-Incision Laparoscopic Multivisceral Resection.- Integrated Multi-subject Surgery.- NOTES: Transvaginal Endoscopic Appendectomy.

Fields of interest

Surgery; Minimally Invasive Surgery; Internal Medicine; Gastroenterology

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-94-007-6954-0

Hardcover

2013. XV, 438 p. 404 illus. in color.

\$209.00

ISBN 978-94-007-6954-0

Due: September 28, 2013

N. Kumar, Institute of Applied Sciences (IASc), Allahabad, India

Biogeogens and Human Health

Health of the people is the most important indicator of the development of a nation. Health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity (as defined by WHO). The state of health of an individual or population depends upon complex interaction of the physical, biological, political and social domains. The environment affects the human health in a big way. People tend to be most susceptible to illness when physically or mentally stressed. Stress, energy and immunity form a closely knit network. Through his experimental findings, the author has brought out this intricate concept of interdependence of biotic (living) and [...]

Features

Health of the people is the most important indicator of the development of a nation. Health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity (as defined by WHO). The state of health of an individual or population depends upon complex interaction of the physical, biological, political and social domains. The environment affects the human health [...]

Contents

Introducing the Concept of Biogeogens.- Dogma of Biogeogens.- Establishing the concept of Biogeogens.- Our studies on rural/tribal populations.- Supporting Evidences from the Evolutionary History of Man.- Evolution of Alternative System of Medicines is itself an Explanatory Evidence, supporting the theory of Biogeogens.

Fields of interest

Medicine (general); Evolutionary Biology; Health Promotion and Disease Prevention

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-81-322-1083-2

Softcover

2013. XI, 75 p. 10 illus., 8 illus. in color. (SpringerBriefs in Public Health)

\$49.99

ISBN 978-81-322-1083-2

usually dispatched within 3 to 5 business days

C.R. Lacruz, J. Saénz de Santamaría, R.H. Bardales

Central Nervous System Intraoperative Cytopathology

The Essentials in Cytopathology book series fulfills the need for an easy-to-use and authoritative synopsis of site specific topics in cytopathology. These guide books fit into the lab coat pocket and are ideal for portability and quick reference. Each volume is heavily illustrated with a full color art program, while the text follows a user-friendly outline format. Central Nervous System Intraoperative Cytopathology covers the full spectrum of benign and malignant conditions of the CNS with emphasis on common disorders. The volume is heavily illustrated and contains useful algorithms that guide the reader through the differential diagnosis of common and uncommon entities [...]

Features

The Essentials in Cytopathology book series fulfills the need for an easy-to-use and authoritative synopsis of site specific topics in cytopathology. These guide books fit into the lab coat pocket and are ideal for portability and quick reference. Each volume is heavily illustrated with a full color art program, while the text follows a user-friendly outline format. Central Nervous System [...]

Contents

Introduction to CNS Intraoperative Cytopathology.- Clinical, Radiologic, and Technical Considerations.- Algorithmic Approach to CNS Intraoperative Cytopathology.- Normal Brain and Gliosis.- Astrocytic Tumors.- Oligodendroglial Tumors.- Ependymal Tumors.- Choroid Plexus Tumors.- Neuronal and Glioneural Tumors.- Embryonal Tumors.- Meningeal Tumors.- CNS Germ Cell Tumors.- Tumors of the Hematopoietic System.- Tumors of the Cranial and Spinal Nerves.- Tumors of the Pineal Region.- Tumors of the Sellar Region.- Metastatic Tumors.- Benign Cystic Lesions.- Non-Neoplastic Disorders.- Extradural [...]

Fields of interest

Pathology; Laboratory Medicine

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-1-4614-8428-8

Softcover

2014. XIV, 276 p. 129 illus. in color. (Essentials in Cytopathology, Vol. 13)

\$79.99

ISBN 978-1-4614-8428-8

usually dispatched within 3 to 5 business days

J.P. Mulhall, Memorial Sloan-Kettering Cancer Center, New York, USA; P.J. Stahl, Columbia University College, New York, USA; D.S. Stember, Beth Israel Medical Center, New York, USA

Clinical Care Pathways in Andrology

Clinical Care Pathways in Andrology provides a valuable resource for understanding clinical decision-making in the context of the predominant male reproductive and sexual disorders for which patients commonly seek evaluation and treatment. Conditions that are less well-known but can be severely bothersome to patients, such as penile sensory loss, are also presented. Based on clinical evidence and expert consensus, practical clinical care pathways are featured for each condition. Each clinical care pathway consists of an algorithm that delineates the overall structure of decision-making for each condition, describes initial clinical presentations, and guides the reader through[...]

Features

Clinical Care Pathways in Andrology provides a valuable resource for understanding clinical decision-making in the context of the predominant male reproductive and sexual disorders for which patients commonly seek evaluation and treatment. Conditions that are less well-known but can be severely bothersome to patients, such as penile sensory loss, are also presented. Based on clinical evidence and [...]

Contents

Abnormal semen analysis.- Anejaculation.- Azoospermia.- Azoospermia: indeterminate etiology.- Azoospermia: surgical sperm retrieval.- Delayed orgasm.- Erectile dysfunction: initial evaluation.- Erectile dysfunction: extended evaluation.- Erectile dysfunction: treatment.- Hematospermia.- Hypogonadism: evaluation.- Hypogonadism: treatment.- Low libido.- Low semen volume.- Penile deformity.- Peyronie's disease.- Penile fracture.- Penile pain.- Penile rehabilitation.- Penile sensory loss.- Premature ejaculation.- Priapism.- Sexual incontinence.- Varicocele.- Vasectomy.- Vasectomy reversal.

Fields of interest

Urology / Andrology; Internal Medicine; Primary Care Medicine; Endocrinology

Target groups

Professional/practitioner

Type of publication

Monograph

More on www.springer.com/978-1-4614-6692-5

Hardcover

2014. VIII, 188 p. 33 illus., 5 illus. in color.

\$139.00

ISBN 978-1-4614-6692-5

usually dispatched within 3 to 5 business days

D. Lipsker, Hôpital Universitaire de Strasbourg, Strasbourg, France

Clinical Examination and Differential Diagnosis of Skin Lesions

Conceived as a guide for practitioners in their work in dermatology, this book is unique in its approach. From cutaneous signs to the richness of differential diagnosis, it guides practitioners through every step, from semiological analysis to diagnosis. The aim is to provide readers with the essentials of relevant dermatological reasoning. The first part of the book focuses on physical examination and on recognizing basic lesions, the practitioner's building blocks. The diseases requiring understanding are then described in the form of a richly illustrated atlas, in which each diagram has been chosen as an exemplary educational tool. In the final part, differential diagnosis is[...]

Features

Conceived as a guide for practitioners in their work in dermatology, this book is unique in its approach. From cutaneous signs to the richness of differential diagnosis, it guides practitioners through every step, from semiological analysis to diagnosis. The aim is to provide readers with the essentials of relevant dermatological reasoning. The first part of the book focuses on physical examination and on [...]

Contents

SEMIOLOGY.- Physical examination and the approach to dermatology.- Dermatological physical examination: basic lesions.- Flat lesions.- Palpable and solid lesions.- Liquid lesions.- Abnormalities in skin thickness and consistency.- Abnormalities affecting the skin surface.- Other signs.- Configuration and arrangement.- Distribution.- Synopsis.- NOSOLOGY.- Prevalent dermatoses.- Tumors and tumorous lesions.- Dermatological signs of medical emergencies.- Cutaneous expression of internal diseases.- DIFFERENTIAL DIAGNOSIS.- Hypopigmented or leukodermic lesions.- Hyperpigmented lesions.- [...]

Fields of interest

Dermatology

Target groups

Professional/practitioner

Type of publication

Atlas

More on www.springer.com/978-2-8178-0410-1

Hardcover

2013. XVIII, 235 p. 500 illus. in color.

\$189.00

ISBN 978-2-8178-0410-1

Due: September 28, 2013

F.C. Fervenza, Mayo Clinic, Rochester, USA; J. Lin, Brigham and Women's Hospital, Boston, USA; S. Sethi, Mayo Clinic, Rochester, USA; A.K. Singh, Brigham and Women's Hospital, Boston, USA (Eds.)

Core Concepts in Parenchymal Kidney Disease

Core Concepts in Parenchymal Kidney Disease provides comprehensive and state-of-the-art information on the diagnosis, treatment, classification and pathogenesis of glomerular and tubulointerstitial diseases. Chapters feature various clinical scenarios and are authored by a team of renowned experts in the field. Experienced clinicians and trainees alike will find this authoritative reference to be a valuable resource and contribution to the literature.

Features

Core Concepts in Parenchymal Kidney Disease provides comprehensive and state-of-the-art information on the diagnosis, treatment, classification and pathogenesis of glomerular and tubulointerstitial diseases. Chapters feature various clinical scenarios and are authored by a team of renowned experts in the field. Experienced clinicians and trainees alike will find this authoritative reference to be a [...]

Fields of interest

Nephrology; Internal Medicine

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8165-2

Hardcover

2014. XV, 418 p. 107 illus., 75 illus. in color.

\$209.00

ISBN 978-1-4614-8165-2

usually dispatched within 3 to 5 business days

F. Crea, G.A. Lanza, P.G. Camici

Coronary Microvascular Dysfunction

In the past two decades a number of studies have shown that abnormalities in the function and structure of coronary microcirculation can be detected in several cardiovascular diseases. On the basis of the clinical setting in which it occurs, coronary microvascular dysfunction (CMD) can be classified into four types: CMD in the absence of any other cardiac disease; CMD in myocardial diseases; CMD in obstructive epicardial coronary artery disease; and iatrogenic CMD. In some instances CMD represents an epiphenomenon, whereas in others it represents an important marker of risk or may contribute to the pathogenesis of myocardial ischemia, thus becoming a possible therapeutic target. This[...]

Features

In the past two decades a number of studies have shown that abnormalities in the function and structure of coronary microcirculation can be detected in several cardiovascular diseases. On the basis of the clinical setting in which it occurs, coronary microvascular dysfunction (CMD) can be classified into four types: CMD in the absence of any other cardiac disease; CMD in myocardial diseases; CMD in [..]

Contents

1 Physiology of coronary microcirculation.- 2 Mechanisms of coronary microvascular dysfunction.- 3 Methods to assess coronary microvascular function.- 4 CMD in the absence of myocardial diseases and obstructive CAD.- 5 CMD in myocardial diseases.- 6 CMD in obstructive CAD.- 7 Iatrogenic coronary microvascular dysfunction.- 8 Treatment of primary CMD.- 9 Treatment of CMD in myocardial diseases.- 10 Treatment of CMD in obstructive CAD.- 11 Prevention of iatrogenic CMD.

Fields of interest

Cardiology; Angiology; Minimally Invasive Surgery

Target groups

Professional/practitioner

Type of publication

Monograph

More on www.springer.com/978-88-470-5366-3

Hardcover

2014. XII, 257 p. 110 illus., 78 illus. in color.

\$189.00

ISBN 978-88-470-5366-3

Due: October 28, 2013

A. Kulczycki (Ed.)

Critical Issues in Reproductive Health

In this book, leading academics and practitioners in the field of reproductive health address topics such as contraception, abortion, sexually transmitted infections, maternal and prenatal health, sexuality and reproductive rights by examining a number of critical issues in these areas. The authors describe new research, identify gaps and priorities in policy and practice, and illustrate innovative solutions. The book further addresses such current imperatives as understanding the social meanings of emergency contraception, measuring gender-based violence, improving reproductive health governance, strengthening health systems and services, and redressing institutional barriers. The[...]

Features

In this book, leading academics and practitioners in the field of reproductive health address topics such as contraception, abortion, sexually transmitted infections, maternal and prenatal health, sexuality and reproductive rights by examining a number of critical issues in these areas. The authors describe new research, identify gaps and priorities in policy and practice, and illustrate innovative [..]

Contents

Ch. 1) Introduction and Overview: Andrzej Kulczycki.- Part One. Expanding the Research Base: Ch. 2) The Vocabulary of Reproductive Health: Alaka Basu.- Ch. 3) Prevalence, Attitudes, Risk factors, and Selected Health-related Outcomes Associated with Spousal Physical Violence during Pregnancy in Egypt: Andrzej Kulczycki.- Ch. 4) Addressing Men's Concerns about Reproductive Health Services and Fertility Regulation in a Rural Sahelian Setting of Northern Ghana: The "Zurugelu Approach." Philip Adongo, James F. Phillips, and Colin Baynes.- Ch. 5) Social Class and Sexual Stigma: Local[...]

Fields of interest

Public Health; Demography; Reproductive Medicine; Quality of Life Research

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-6721-8

Hardcover

2014. IX, 351 p. 19 illus. (The Springer Series on Demographic Methods and Population Analysis, Vol. 33)

\$179.00

ISBN 978-94-007-6721-8

usually dispatched within 3 to 5 business days

P. Chabrot, CHU - Hôpital Gabriel Montpied, Clermont-Ferrand, France; L. Boyer, CHU - Hôpital Gabriel Montpied, Clermont-Ferrand, France (Eds.)

Embolization

As minimally invasive therapies, endovascular embolization and chemo-embolization are now the first-choice palliative or curative therapeutic alternatives in oncology, traumatology, functional pathology, treatment of benign tumors, and management of post operative complications. This book is a handy pocket guide for trainee vascular radiologists, and serves as an aide-memoire for senior vascular radiologists. Each procedure is shown in its entirety and also discusses expected outcomes. The first part of the book covers the materials and techniques used; the second part deals with the general physiopathological principles of embolization; and the third part analyses the main[...]

Features

Innovations in catheterization techniques and embolization agents have considerably contributed to the development of endovascular occlusion techniques in arterial and venous trunks as much as distal parenchymal capillar beds. Mini invasive therapies, endovascular embolization and chemo-embolization now constitute valuable therapeutic alternatives in various fields: on a purely palliative or on a curative [..]

Contents

1. The Tool Box: Catheterization Devices and Embolization Agents.- 2. Vascular Occlusions and Parenchymal Embolizations: Principles.- 3. Hemorrhages of the ENT Area.- 4. Massive Hemoptysis: Radiological Management.- 5. Embolization of the Pulmonary Artery.- 6. Hepatic Artery Embolization.- 7. Chemoembolizations and Hepatic Intra Arterial Chemotherapies.- 8. Portal Vein Embolization.- 9. Splenic Arterial Embolization.- 10. Gastro Intestinal Tract Arterial Haemorrhages.- 11. True and false Aneurysms of Visceral and Renal Arteries.- 12. Hypogastric Arteries: Aneurysms, Occlusions Before[...]

Fields of interest

Vascular Surgery; Interventional Radiology; Cardiology; Oncology

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-1-4471-5181-4

Hardcover

2014. XVII, 453 p. 123 illus., 9 illus. in color.

\$139.00

ISBN 978-1-4471-5181-4

usually dispatched within 3 to 5 business days

N. Konrad, University Medicine Berlin, Berlin, Germany; B. Völlm, University of Nottingham and Rampton Hos, Nottingham, United Kingdom; D.N. Weisstub, University of Montreal, Montreal, Canada (Eds.)

Ethical Issues in Prison Psychiatry

Recent surveys demonstrate a high and possibly increasing prevalence of mental disorders in prisoners. They have an increased risk of suffering from a mental disorder that transcends countries and diagnoses. Ethical dilemmas in prison psychiatry arise from resource allocation and include issues of patient choice and autonomy in an inherently coercive environment. Ethical conflicts may arise from the dual role of forensic psychiatrists giving raise to tensions between patient care/protection of the public. This book describes models and ethical issues of psychiatric healthcare in prison in several countries. Relevant issues are: the professional medical role of a psychiatrist and/or[...]

Features

Recent surveys demonstrate a high and possibly increasing prevalence of mental disorders in prisoners. They have an increased risk of suffering from a mental disorder that transcends countries and diagnoses. Ethical dilemmas in prison psychiatry arise from resource allocation and include issues of patient choice and autonomy in an inherently coercive environment. Ethical conflicts may arise from the dual role [...]

Contents

Introduction; Prison Psychiatry (Norbert Konrad).- Ethics within the Prison System (Helmut Pollähne).- Ethical Issues in Correctional Psychiatry in the United States (Henry Dlugacz Julie Y. Low, Christopher Wimmer and Lisa Knox).- The Evolution of Punishment and Incarceration (George B. Palermo).- Forensic Research With The Mentally Disordered Offender (Julio Arboleda-Flórez and David Weisstub).- Special problems in different countries.- Ethical issues in Australian prison psychiatry (Danny Sullivan).- Penitentiary mental health care in Belgium (Paul Cosyns and Kris Goethals).- Ethical[...]

Fields of interest

Psychiatry; Ethics; Medicine (general); Rehabilitation; Political Science, general; Criminal Law

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-0085-7

Hardcover

2013. XIII, 434 p. 4 illus. (International Library of Ethics, Law, and the New Medicine, Vol. 55)

\$129.00

ISBN 978-94-007-0085-7

usually dispatched within 3 to 5 business days

J. Dekker, VU University Medical Center, Amsterdam, Netherlands (Ed.)

Exercise and Physical Functioning in Osteoarthritis

Medical, Neuromuscular and Behavioral Perspectives

Osteoarthritis (OA) is among the top 10 of most disabling diseases in the Western world. It is the major cause of pain and disability among the elderly. This book provides a contextual review of recent research on neuromuscular factors and behavioral risk factors for functional decline in OA, with a special emphasis on explanatory mechanisms. In addition, the book discusses innovative approaches to exercise and physical activity in OA, derived from research on behavioral and neuromuscular risk factors for functional decline in OA. Recent research has shown that neuromuscular factors (such as muscle strength, joint laxity) and behavioral factors (such as avoidance of activity,[...])

Features

Osteoarthritis (OA) is among the top 10 of most disabling diseases in the Western world. It is the major cause of pain and disability among the elderly. This book provides a contextual review of recent research on neuromuscular factors and behavioral risk factors for functional decline in OA, with a special emphasis on explanatory mechanisms. In addition, the book discusses innovative approaches to exercise [...]

Contents

1. Introduction.- Part I. Osteoarthritis of the knee or hip.- 2. Epidemiology, pathogenesis, and clinical aspects.- 3. Therapeutic options.- Part II. Functional decline.- 4. Risk factors for functional decline.- 5. Neuromuscular mechanisms explaining functional decline.- 6. Behavioral mechanisms explaining functional decline.- Part III. Exercise therapy.- 7. Regular exercise therapy.- 8. Exercise aiming at neuromuscular mechanisms.- 9. Exercise aiming at behavioral mechanisms.- 10. Comorbidity, overweight, and exercise.- 11. Concluding remarks.

Fields of interest

Geriatrics / Gerontology; Health Psychology; Rehabilitation; Physiotherapy; Rheumatology

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-7214-8

Softcover

2014. VIII, 132 p. 25 illus., 19 illus. in color. (Springer-Briefs in Specialty Topics in Behavioral Medicine)

\$49.95

ISBN 978-1-4614-7214-8

usually dispatched within 3 to 5 business days

null UKAAN, Kings College London, London, United Kingdom (Ed.)

Handbook for Attention Deficit Hyperactivity Disorder in Adults

This book is a direct response to a severe treatment gap in recognising, treating and managing attention deficit hyperactivity disorder (ADHD) in adults. Affecting 3–4% of the global population, ADHD has long been considered a pediatric psychiatric condition and continues to be overlooked in adults, who often go on to endure a lifetime of clinically significant impairments that affect work performance, social behavior, and personal relationships. However, in the wake of the recognition of ADHD in adults in the Diagnostic and Statistical Manual of Mental Disorders IV (considered the absolute gold standard in psychiatry) and a greater number of pharmaceutical treatments being indicated[...]

Features

This book is a direct response to a severe treatment gap in recognising, treating and managing attention deficit hyperactivity disorder (ADHD) in adults. Affecting 3–4% of the global population, ADHD has long been considered a pediatric psychiatric condition and continues to be overlooked in adults, who often go on to endure a lifetime of clinically significant impairments that affect work performance, social [...]

Contents

Introduction to attention deficit hyperactivity disorder.- Definition of attention deficit hyperactivity disorder in adults.- The scientific basis of attention deficit hyperactivity disorder in adults.- Diagnostic assessment of attention deficit hyperactivity disorder in adults.- Neuropsychological assessment.- Comorbid symptoms, syndromes, and disorders.- Pharmacological treatments.- Psychological treatments.- Attention deficit hyperactivity disorder during pregnancy.- Attention deficit hyperactivity disorder and the criminal justice system.- Service provision for adults with attention[...]

Fields of interest

Psychiatry; Psychopharmacology; Behavioral Therapy; Medicine (general)

Target groups

Professional/practitioner

Type of publication

Handbook

More on www.springer.com/978-1-908517-50-0

Softcover

2013. XV, 216 p. 15 illus., 8 illus. in color.

\$59.99

ISBN 978-1-908517-50-0

usually dispatched within 3 to 5 business days

H.A.M.J. ten Have, B. Gordijn, Dublin City University, Dublin, Ireland (Eds.)

Handbook of Global Bioethics

As the first of its kind, this handbook presents state-of-the-art information and analysis concerning the state of affairs in bioethics in approximately 50 countries. The country reports point out the most important discussions as well as the emerging topics in the field. Readers can orientate themselves quickly as regards the various relevant issues, institutional structures and expertise available in these countries. The authorship of this reference work is truly global as it involves contributions from the best authors with innate knowledge of the bioethics situation in these countries.

Features

As the first of its kind, this handbook presents state-of-the-art information and analysis concerning the state of affairs in bioethics in approximately 50 countries. The country reports point out the most important discussions as well as the emerging topics in the field. Readers can orientate themselves quickly as regards the various relevant issues, institutional structures and expertise available [...]

Contents

Section 1: Introduction.- Section 2: Principles of Global Bioethics.- Section 3: Cultural Perspectives.- Section 4: Religious Perspectives.- Section 5: Specific Issues from a Global Perspective.- Section 6: Future Perspectives.- Section 7: Countries.

Fields of interest

Theory of Medicine / Bioethics; Ethics; Philosophy of Medicine

Target groups

Research

Type of publication

Handbook

More on www.springer.com/978-94-007-2511-9

2014. XXIV, 1685 p. 54 illus., 49 illus. in color. eReference.

\$1,100.00

ISBN 978-94-007-2512-6

Online orders shipping within 2-3 days.

M. Berenguer, Dept of Hepatology and Liver Transplant, Valencia, Spain (Ed.)

Hepatitis C Virus and Liver Transplantation

Hepatitis C Virus and Liver Transplantation is designed to provide a comprehensive and state-of-the-art overview of the major issues specific to the field of liver transplantation and hepatitis C virus infection. The sections of the book have been structured to review the overall scope of issues of recurrent hepatitis C in different complex settings, including retransplantation, HIV-coinfected patients or in the setting of suboptimal graft donors. This book provides up-to-date information on the application of new therapies to the field of liver transplantation. It provides the most recent data on their efficacy, the management of side effects, as well as the potential interactions[...]

Features

Hepatitis C Virus and Liver Transplantation is designed to provide a comprehensive and state-of-the-art overview of the major issues specific to the field of liver transplantation and hepatitis C virus infection. The sections of the book have been structured to review the overall scope of issues of recurrent hepatitis C in different complex settings, including retransplantation, HIV-coinfected [...]

Contents

1. Treatment of Hepatitis C Before Liver Transplantation.- 2. Donor-Recipient Matching in HCV-Infected Patients.- 3. Natural History of Recurrent Hepatitis C: Impact of Immunosuppression.- 4. Treatment of Hepatitis C After Liver Transplantation.- 5. Hepatitis C and Liver Transplantation in the HIV Co-Infected Patients.- 6. Liver Transplantation for Hepatocellular Carcinoma in HCV-Infected Patients.- 7. Retransplantation for HCV-Related Liver Disease.- 8. Use of Anti-HCV Positive Grafts in Liver Transplantation.

Fields of interest

Hepatology; Transplant Surgery; Abdominal Surgery

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8437-0

Hardcover

2014. X, 123 p. 13 illus., 8 illus. in color.

\$189.00

ISBN 978-1-4614-8437-0

usually dispatched within 3 to 5 business days

Y. Shav-Tal, Bar-Ilan University, Ramat Gan, Israel (Ed.)

Imaging Gene Expression

Methods and Protocols

As imaging technologies and approaches have evolved, the scope of certain imaging techniques has moved far beyond the production of purely illustrative images or appealing time-lapse movies to providing the scientist with a rich range of ways to measure and quantify the biological process and outcome of gene expression. In Imaging Gene Expression: Methods and Protocols, expert authors offer up-to-date approaches and protocols that scientists in the field have developed, which would benefit the broader scientific community. Divided in three convenient parts, this detailed book covers the output of a gene, namely the RNA molecules that are transcribed from the gene and the way by which[...]

Features

As imaging technologies and approaches have evolved, the scope of certain imaging techniques has moved far beyond the production of purely illustrative images or appealing time-lapse movies to providing the scientist with a rich range of ways to measure and quantify the biological process and outcome of gene expression. In Imaging Gene Expression: Methods and Protocols, expert authors offer [...]

Contents

High-Throughput Fluorescence-Based Screen to Identify Factors Involved in Nuclear Receptor Recruitment to Response Elements.- Live-Cell Imaging Combined with Immunofluorescence, RNA, or DNA FISH to Study the Nuclear Dynamics and Expression of the X-Inactivation Center.- Single Molecule Resolution Fluorescent In Situ Hybridization (smFISH) in the Yeast *S. cerevisiae*.- Measuring Transcription Dynamics in Living Cells Using Fluctuation Analysis Nuclear Poly(A) RNA Movement Within and Among Speckle Nuclear Bodies and the Surrounding Nucleoplasm.- Nuclear Trafficking and Export of Single,[...]

Fields of interest

Imaging / Radiology; Gene Expression

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-62703-525-5

Hardcover

2013. XIII, 368 p. 54 illus., 36 illus. in color. With online files/update. (Methods in Molecular Biology, Vol. 1042)

\$139.00

ISBN 978-1-62703-525-5

usually dispatched within 3 to 5 business days

E. Berner (Ed.)

Informatics Education in Healthcare

Lessons Learned

Features

This book reviews and defines the current state of the art for informatics education in medicine and health care. This field has undergone considerable change as the field of informatics itself has evolved. Twenty years ago almost the only individuals involved in health care who had even heard the term "informatics" were those who identified themselves as medical or nursing informaticians. Today, we have a [...]

Contents

Introduction and Overview.- Managing Unspoken Assumptions in Online Education.- Training for Informatics Research Careers: History of Extramural Informatics Training at the National Library of Medicine.- Clinical Informatics Subspecialty Certification and Training.- Education in Nursing Informatics.- Applied Informatics for Health IT Managers.- Informatics for the Health Information Technology Workforce.- Online Continuing Education in Informatics—the AMIA 10x10 Experience.- Educating the Informatics-Enabled Physician.- Informatics Education for Health Administrators.- Bioinformatics[...]

Fields of interest

Health Informatics; Medical Education; Health Economics

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-1-4471-4077-1

Hardcover

2014. XVIII, 243 p. 8 illus. (Health Informatics)

\$89.99

ISBN 978-1-4471-4077-1

usually dispatched within 3 to 5 business days

H.K. Gaggin, Massachusetts General Hospital, Boston, USA; J.L. Januzzi, Jr., Massachusetts General Hospital, Boston, USA (Eds.)

MGH Cardiology Board Review

MGH Cardiology Board Review is intended for physicians studying for the Cardiology Board Examination (Initial Certification or Re-certification) and for any busy practitioners who would like to review high-yield cardiology such as those in cardiology, emergency medicine, internal medicine, family practice, or even surgery. Designed for those on the go, each section is meant to be completed in 30 minutes; and at 30 minutes a day, the reader will have a complete overview of up-to-date information in 30 days. Each section has a concise didactic followed by a questions section with an identical format to the Cardiovascular Board Examination of the American Board of Internal Medicine. This[...]

Features

Preparing for the cardiology board examination is an intensely stressful period and traditionally relies on the participant searching through their own references, whether that be the large textbooks, small handbooks and their own notes. Good books are generally too long and time-consuming, while shorter books are either insubstantial in content or rely too much on the views of one author. The key elements [...]

Contents

History and Physical Examination: An Evidence-Based Approach.- Electrocardiography.- Exercise Stress Testing and Nuclear Cardiology.- Echocardiography.- Cardiac Noninvasive Imaging: Chest Radiography, Cardiovascular Magnetic Resonance & Computed Tomography of the Heart.- Cardiac Catheterization, Coronary Arteriography and Intravascular Imaging.- Diagnosis and Management of Acute Heart Failure.- Chronic and End-Stage Heart Failure.- Supraventricular Arrhythmias.- Ventricular Arrhythmias.- Bradycardia.- Syncope.- Acute Coronary Syndrome.- Chronic Coronary Artery Disease.- Peripheral[...]

Fields of interest

Cardiology

Target groups

Graduate

Type of publication

Professional book

More on www.springer.com/978-1-4471-4482-3

Softcover

2014. XXVI, 633 p. 260 illus., 77 illus. in color. With online files/update.

\$69.99

ISBN 978-1-4471-4482-3

usually dispatched within 3 to 5 business days

A. Venot, Université Paris 13, Paris, France; A. Burgun, C. Quantin (Eds.)

Medical Informatics, e-Health

Fundamentals and Applications

Over the years, medical informatics has matured into a true scientific discipline. Fundamental and applied aspects are now taught in various fields of health, including medicine, dentistry, pharmacy, nursing and public health. Medical informatics is also often included in the curricula of many other disciplines, including the life sciences, engineering and economics. Medical informatics is a complex and rapidly changing discipline. Relatively few books have been published on the subject, and they rapidly become obsolete. This book is the fruit of a collaborative effort between authors teaching medical informatics in France and others who are conducting research in this field. In[...]

Features

Over the years, medical informatics has matured into a true scientific discipline. Fundamental and applied aspects are now taught in various fields of health, including medicine, dentistry, pharmacy, nursing and public health. Medical informatics is also often included in the curricula of many other disciplines, including the life sciences, engineering and economics. Medical informatics is a [...]

Contents

Medical Informatics as a scientific discipline.- Medical vocabulary, terminological resources, health information coding.- The management and dissemination of knowledge in Healthcare.- The representation of the patient data in the health information systems and the electronic medical record.- Medical Image processing: principles, main applications and prospects.- Augmented Medical Interventions : Surgetics and Robotics.- Clinical diagnostic decision making support.- Therapeutic decision making support.- Medico-economic decision making support.- Public health decision making.- Security.[...]

Fields of interest

Health Informatics; Health Administration; Medicine (general); Computer Appl. in Administrative Data Processing; Special Purpose and Application-Based Systems; Computational Biology / Bioinformatics

Target groups

Upper undergraduate

Type of publication

Contributed volume

More on www.springer.com/978-2-8178-0477-4

Hardcover

Original French edition published by Springer, Paris, 2013

2014. X, 494 p. 124 illus., 81 illus. in color. (Health Informatics)

\$99.00

ISBN 978-2-8178-0477-4

usually dispatched within 3 to 5 business days

J.D. Kelly, IV, University of Pennsylvania, Philadelphia, USA (Ed.)

Meniscal Injuries

Management and Surgical Techniques

Thoroughly discussing the varied elements of meniscal damage and repair, *Meniscal Injuries: Management and Surgical Techniques* includes the insights and expertise of over 20 leading surgeons and researchers on topics ranging from meniscal anatomy, physical examination, innovative resection and repair techniques, gene therapy, and tissue regeneration. This treatise offers wisdom aimed at assessing true surgical candidates, exploring the intricacies of meniscal composition and function, an overview of meniscal scaffolds and replacements, and patient examination pearls. Also discussed in depth is cutting edge research concerning meniscal repair enhancement, nanofiber technology as a[...]

Features

Thoroughly discussing the varied elements of meniscal damage and repair, *Meniscal Injuries: Management and Surgical Techniques* includes the insights and expertise of over 20 leading surgeons and researchers on topics ranging from meniscal anatomy, physical examination, innovative resection and repair techniques, gene therapy, and tissue regeneration. This treatise offers wisdom aimed at assessing [...]

Contents

Meniscal Anatomy.- Physical Examination for Meniscus Tears.- Imaging of Meniscus Pathology.- Meniscectomy: The Basics.- Meniscus Allograft Transplantation.- Meniscal Scaffolds: Options Post-Meniscectomy.- Meniscal Repair Techniques.- Meniscal Posterior Root Tear.- Indications for Meniscus Repair.- Basic Science of Meniscus Repair: Limitations and Emerging Strategies.- Biological Augmentation of Meniscus Repair and Restoration.- Rehabilitation Following Meniscus Repair.

Fields of interest

Surgical Orthopedics; Sports Medicine; Minimally Invasive Surgery

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8485-1

Hardcover

2014. XIV, 129 p. 81 illus., 64 illus. in color.

\$189.00

ISBN 978-1-4614-8485-1

usually dispatched within 3 to 5 business days

T. Takahashi, Asahikawa Medical University, Asahikawa, Japan

Microcirculation in Fractal Branching Networks

This book presents a new method for analyzing the structure and function of the biological branching systems of fractal trees, with a focus on microcirculation. Branching systems in humans (vascular and bronchial trees) and those in the natural world (plants, trees, and rivers) are characterized by a fractal nature. To date, fractal studies have tended to concentrate on fractal dimensions, which quantify the complexity of objects, but the applications for practical use have remained largely unexplored. This book breaks new ground with topics that include the human retinal microcirculatory network, oxygen consumption by vascular walls, the Fåhræus-Lindqvist effect, the bifurcation[...]

Features

This book presents a new method for analyzing the structure and function of the biological branching systems of fractal trees, with a focus on microcirculation. Branching systems in humans (vascular and bronchial trees) and those in the natural world (plants, trees, and rivers) are characterized by a fractal nature. To date, fractal studies have tended to concentrate on fractal dimensions, which quantify [...]

Contents

Branching Systems of Fractal Vascular Trees.- A Theoretical Model for the Microcirculatory Network.- Oxygen Consumption by Vascular Walls in the Retinal Vasculature.- The Fåhræus-Lindqvist Effect on the Retinal Microcirculation.- Effects of a Reduction in the Bifurcation Exponent from 3.00 to 2.85.- Asymmetrically Branching Microvascular Networks

Fields of interest

Cardiology; Ophthalmology; Physiological, Cellular and Medical Topics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-4-431-54507-1

Hardcover

2014. XIII, 138 p. 43 illus.

\$189.00

ISBN 978-4-431-54507-1

usually dispatched within 3 to 5 business days

L. Saba, J.M. Sanches, L.M. Pedro, Hospital de Santa Maria, Lisboa, Portugal; J.S. Suri (Eds.)

Multi-Modality Atherosclerosis Imaging and Diagnosis

Stroke is one of the leading causes of death in the world, resulting mostly from the sudden ruptures of atherosclerosis carotid plaques. Understanding why and how plaque develops and ruptures requires a multi-disciplinary approach such as radiology, biomedical engineering, medical physics, software engineering, hardware engineering, pathological and histological imaging. *Multi-Modality Atherosclerosis Imaging, Diagnosis and Treatment* presents a new dimension of understanding Atherosclerosis in 2D and 3D. This book presents work on plaque stress analysis in order to provide a general framework of computational modeling with atherosclerosis plaques. New algorithms based on 3D and 4D[...]

Features

Stroke is one of the leading causes of death in the world, resulting mostly from the sudden ruptures of atherosclerosis carotid plaques. Understanding why and how plaque develops and ruptures requires a multi-disciplinary approach such as radiology, biomedical engineering, medical physics, software engineering, hardware engineering, pathological and histological imaging. *Multi-Modality Atherosclerosis* [...]

Contents

Histology and Pathology of 3D Atherosclerosis.- Clinical MRA of the Carotid Arteries.- Quantitative MR Imaging of the Carotids.- Contrast Agents in Carotid Angiography with Magnetic Resonance.- Quantitative Magnetic Resonance Analysis in the Assessment of Cardiac Diseases.- Atherosclerosis Plaque Stress Analysis: A Review.- Carotid Plaque Stress Analysis: Issues on Patient Specific Modeling.- Noninvasive Targeting of Vulnerable Carotid Plaques for Therapeutic Interventions.- Clinical CT Imaging of Carotid Arteries.- Quantitative CT Imaging of Carotid Arteries.- Quantitative Computed[...]

Fields of interest

Imaging / Radiology; Cardiology; Image Processing and Computer Vision

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7424-1

Hardcover

2014. XIX, 422 p. 330 illus., 208 illus. in color.

\$339.00

ISBN 978-1-4614-7424-1

usually dispatched within 3 to 5 business days

G.K. Wenning, Innsbruck Medical University, Innsbruck, Austria;
A. Fanciulli, Innsbruck Medical University, Innsbruck, Austria
(Eds.)

Multiple System Atrophy

This textbook provides a comprehensive monograph on multiple system atrophy (MSA), a rare and fatal neurodegenerative disorder that presents with autonomic failure and either parkinsonism (MSA-P) or cerebellar ataxia (MSA-C). The underlying neuropathology of MSA is characterized by striatonigral degeneration (SND), olivopontocerebellar atrophy (OPCA) and unique oligodendroglial cytoplasmic alpha-synuclein inclusions. MSA is therefore classified among the alpha-synucleinopathies such as Parkinson's disease, pure autonomic failure and dementia with Lewy bodies. Over the last decade there have been important advances in early diagnosis, pathogenesis research and clinical trial activity.[...]

Features

This textbook provides a comprehensive monograph on multiple system atrophy (MSA), a rare and fatal neurodegenerative disorder that presents with autonomic failure and either parkinsonism (MSA-P) or cerebellar ataxia (MSA-C). The underlying neuropathology of MSA is characterized by striatonigral degeneration (SND), olivopontocerebellar atrophy (OPCA) and unique oligodendroglial cytoplasmic alpha-synuclein [...]

Contents

1. Historical Review.- 2. Epidemiology.- 3. Neuropathology.- 4. Etiopathogenesis.- 5. Animal Models.- 6. Clinical Presentation.- 7. Clinical diagnostic Criteria.- 8. Natural History.- 9. Investigations.- 10. Treatment.

Fields of interest

Neurology; Neurosciences

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-3-7091-0686-0

Hardcover

2014. XVI, 198 p. 33 illus., 20 illus. in color.

\$189.00

ISBN 978-3-7091-0686-0

usually dispatched within 3 to 5 business days

T.M. Önerci, Hacettepe University, Ankara, Turkey (Ed.)

Nasal Physiology and Pathophysiology of Nasal Disorders

Nasal physiology and pathophysiology is a relatively neglected area, yet without a deep knowledge of the physiology it is impossible to understand the impact of structural changes and the process of disease development or to make sound treatment decisions. With the help of numerous tables, schematic drawings, and color photographs, this book will enable the reader to understand the nasal physiology and pathophysiology in detail. All four functions of the nose – respiration, defense, olfaction, and cosmesis – are covered. Each chapter addresses one important aspect in an accessible way, and each is written by an acknowledged expert on the topic under consideration. The various[...]

Features

Nasal physiology and pathophysiology is a relatively neglected area, yet without a deep knowledge of the physiology it is impossible to understand the impact of structural changes and the process of disease development or to make sound treatment decisions. With the help of numerous tables, schematic drawings, and color photographs, this book will enable the reader to understand the nasal physiology and [...]

Contents

Why the nasal passage, and why do we have a nasal septum.- Functional Defense Mechanisms of the Nasal Respiratory Epithelium.- Cilia, ciliary movements, mucociliary transport.- T cells.- Mucus composition, goblet cells, glands.- Nasal Mucosal immunology, Secretory proteins Ig A, G etc B cell.- Toll like receptor, innate immunity.- Mast Cell.- Tight junctions.- Macrophage (Monocyte).- Intracellular signaling pathway molecular aspect.- NO.- Eosinophil.- Neutrophil.- Nasal Reflexes, Trigeminal pain.- Sneezing, Why and how does the nose.- Air conditioning of the Nose.- Olfaction.- [...]

Fields of interest

Otorhinolaryngology; Immunology; Pathology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-3-642-37249-0

Hardcover

2014. XV, 616 p. 261 illus., 171 illus. in color.

\$209.00

ISBN 978-3-642-37249-0

Due: October 28, 2013

M.A. Neff, Minimally Invasive and Bariatric Surgeon, Cherry Hill, USA (Ed.)

Passing the General Surgery Oral Board Exam

Edited by Dr. Marc Neff, Passing the General Surgery Oral Board Exam, Second Edition helps candidates prepare for the General Surgery Oral Board Exam in a different way than other review books. In addition to covering concepts frequently addressed on the test, the review also alerts you to "common curveballs" and "strikeouts" – the unexpected problems or seemingly benign actions (or inactions) that could result in a missed diagnosis or misdiagnosis, and thus result in failure to pass the exam. Fully updated and expanded to reflect the many changes in standards of care, this unique study guide is the first to expose the potential traps and pitfalls of the exam by providing examples of [...]

Features

Edited by Dr. Marc Neff, Passing the General Surgery Oral Board Exam, Second Edition helps candidates prepare for the General Surgery Oral Board Exam in a different way than other review books. In addition to covering concepts frequently addressed on the test, the review also alerts you to "common curveballs" and "strikeouts" – the unexpected problems or seemingly benign actions (or inactions) that [...]

Contents

Organizational Theme.- Breast.- Colon and Small Bowel.- Abdominal Endocrine.- Head and Neck Endocrine.- Esophagus.- Genitourinary.- Hepatobiliary.- Pancreas.- Pediatric.- Perioperative Care.- Skin and Soft Tissue.- Stomach and Duodenum.- Thoracic.- Trauma and Critical Care.- Vascular.- Conclusions: Last Curveballs Considerations.

Fields of interest

Surgery; General Surgery

Target groups

Professional/practitioner

Type of publication

Handbook

More on www.springer.com/978-1-4614-7662-7

Softcover

2014. XIII, 153 p.

\$89.99

ISBN 978-1-4614-7662-7

usually dispatched within 3 to 5 business days

S. Lara-Cinisomo, K.L. Wisner (Eds.)

Perinatal Depression among Spanish-Speaking and Latin American Women

A Global Perspective on Detection and Treatment

Perinatal Depression among Spanish-Speaking and Latin American Women: A Global Perspective on Detection and Treatment Sandra Luz Lara-Cinisomo and Katherine Leah Wisner, editors As more is known about postpartum depression, the more it is recognized as a global phenomenon. Yet despite the large numbers, information about this condition as experienced by Spanish speaking women and Latinas has not always been easy to come by. Perinatal Depression among Spanish-Speaking and Latin American Women focuses on four diverse Latina populations (Mexico, Chile, Spain, and U.S.) to analyze key similarities and differences within this large and wide-ranging group. This first-of-its-kind reference[...]

Features

Perinatal Depression among Spanish-Speaking and Latin American Women: A Global Perspective on Detection and Treatment Sandra Luz Lara-Cinisomo and Katherine Leah Wisner, editors As more is known about postpartum depression, the more it is recognized as a global phenomenon. Yet despite the large numbers, information about this condition as experienced by Spanish speaking women and Latinas has [...]

Contents

Chapter 1: A global perspective on postpartum depression: An overview of the current research with Spanish-speaking women in the U.S. and abroad.- Chapter 2: Characteristics of Hispanic Women Screened for Postpartum Depression.- Chapter 3: Maternity, migration and mental health: Comparison between Spanish and Latina immigrant mothers in postpartum depression and health behaviors.- Chapter 4: Assessment, Engagement and Treatment Entry for Latina Women with Perinatal Depression.- Chapter 5: Screening for postpartum depression in Chilean women with the Postpartum Depression Screening[...]

Fields of interest

Maternal and Child Health; Sociology, general; Clinical Psychology; Psychiatry

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8044-0

Hardcover

2014. XX, 146 p. 12 illus.

\$189.00

ISBN 978-1-4614-8044-0

usually dispatched within 3 to 5 business days

B.D. Springer, J. Parvizi, Rothman Institute of Orthopedics, Philadelphia, USA (Eds.)

Periprosthetic Joint Infection of the Hip and Knee

Periprosthetic Joint Infection of the Hip and Knee is a practical reference for the diagnosis and treatment of total joint infections following hip and knee arthroplasty. In addition to useful chapters presenting common tests and algorithms used for diagnosis, the book gives background on the epidemiology, risk factors, and prevention strategies of periprosthetic joint infection. Additionally, practical clinical information is given, including antibiotic treatment strategies and delivery methods and medical optimization techniques for physicians to follow for patient care and follow-up. Covering a topic that is currently underrepresented in the medical literature, Periprosthetic Joint[...]

Features

Periprosthetic Joint Infection of the Hip and Knee is a practical reference for the diagnosis and treatment of total joint infections following hip and knee arthroplasty. In addition to useful chapters presenting common tests and algorithms used for diagnosis, the book gives background on the epidemiology, risk factors, and prevention strategies of periprosthetic joint infection. Additionally, practical [...]

Contents

Epidemiology of Total Hip and Knee Arthroplasty Infection.- Risk Factors for Periprosthetic Joint Infection.- Prevention of Periprosthetic Joint Infection.- Medical Optimization of Patients Prior to Surgery.- Diagnosis of Periprosthetic Joint Infection: An Algorithmic Approach to Patients.- Intraoperative Tests to Aid in Diagnosis of Periprosthetic Joint Infection.- Biofilm-Related Periprosthetic Joint Infection.- Microbiology of Periprosthetic Joint Infection.- Antibiotics in Treatment of Periprosthetic Joint Infection.- PMMA and Antimicrobial Delivery.- Prosthetic Retention:[...]

Fields of interest

Surgical Orthopedics; Sports Medicine; Rheumatology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7927-7

Hardcover

2014. XVII, 257 p. 57 illus., 35 illus. in color.

\$189.00

ISBN 978-1-4614-7927-7

usually dispatched within 3 to 5 business days

G. SALIOU, M. Theaudin, Hôpital du Kremlin-Bicêtre, Le Kremlin-Bicêtre, France; C. Join-Lambert Vincent, R. Souillard-Sce-mama, Centre hospitalier Sainte-Anne, Paris, France

Practical Guide to Neurovascular Emergencies

Modern vascular neurology, particularly in the emergency setting, often requires a great capacity for analysis and synthesis. Physicians who manage these patients must have acquired multidisciplinary skills, including a good knowledge of clinical neurology and medical imaging, but they may also need to be skilled in cardiology and intensive care. The initial clinical and imaging examinations play a decisive role in the management strategy. This book, written by neurologists and neuroradiologists, is designed to help all physicians involved in the management of neurovascular disease. The format and contents of this book, including the latest guidelines from learned societies, are[...]

Features

Modern vascular neurology, particularly in the emergency setting, often requires a great capacity for analysis and synthesis. Physicians who manage these patients must have acquired multidisciplinary skills, including a good knowledge of clinical neurology and medical imaging, but they may also need to be skilled in cardiology and intensive care. The initial clinical and imaging examinations play a decisive [...]

Contents

Introduction.- Principles of Magnetic Resonance Imaging (MRI).- Arterial stroke overview.- Territorial brain infarction.- Watershed infarction.- Transient ischemic attack.- Lacunar infarction and small arteries diseases.- Rare cerebral vasculopathy.- Hemopathy.- Cerebral hemorrhage.- Cerebral venous thrombosis.- Medullary infarction.- Imaging differential diagnosis in stroke.- Incidentalomas.- Thrombolysis.

Fields of interest

Imaging / Radiology; Neuroradiology; Emergency Medicine; Intensive / Critical Care Medicine; Cardiology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-2-8178-0480-4

Hardcover

Original French edition published by Springer-Verlag, Paris, 2011

2014. XVII, 192 p. 137 illus., 42 illus. in color.

\$139.00

ISBN 978-2-8178-0480-4

usually dispatched within 3 to 5 business days

B. Gleich, Universität zu Lübeck, Lübeck, Germany

Principles and Applications of Magnetic Particle Imaging

Bernhard Gleich introduces Magnetic Particle Imaging (MPI) including all aspects that are necessary for a complete understanding. MPI is a new imaging modality invented by Bernhard Gleich and Jürgen Weizenecker. The method is capable of imaging the distribution of superparamagnetic iron oxide particles (SPIOs) with high sensitivity, high spatial resolution, and high imaging speed. The author summarizes the results of a number of original papers and countless innovations he has elaborated in the young discipline of magnetic particle imaging.

Features

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Contents

Medical imaging methods.- Magnetic Particle Imaging.- Magnetic nanoparticles.

Fields of interest

Health Informatics; Computer Imaging, Vision, Pattern Recognition and Graphics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-658-01960-0

Softcover

2014. XII, 118 p. 25 illus. (Aktuelle Forschung Medizintechnik)

\$99.00

ISBN 978-3-658-01960-0

usually dispatched within 3 to 5 business days

G. Bowyer, University of Southampton Hospital, Southampton, United Kingdom; A. Cole, University of Southampton Hospital, Southampton, United Kingdom (Eds.)

Selected References in Trauma and Orthopaedics

Selected References in Trauma and Orthopaedics is an essential study tool for all those preparing for the orthopedic FRCS (Tr & Orth). This work provides a selection of references from the Trauma and Orthopedic literature, which will be of interest to the surgeon preparing for the Intercollegiate Specialty Board examination, and similar end-of training examinations in other countries. It will also be of interest to examiners and trainers who are preparing their trainee colleagues for the examination, as well as providing a literature basis for their own practice. Selected References in Trauma and Orthopaedics presents the classical papers underlying current practice as well as recent[...]

Features

Selected References in Trauma and Orthopaedics provides a selection of references from the Trauma and Orthopedic literature, aimed at the surgeon preparing for the Intercollegiate Specialty Board examination, and similar end-of training examinations in other countries. It is the perfect guide for examiners and trainers who are preparing their trainees for the examination, as well as providing a [...]

Contents

Part I. Adult Elective Orthopaedics.- Part II. Trauma.- Part III. Children's Orthopaedics.- Part IV. Hand and Upper Limb.

Fields of interest

Orthopedics

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4471-4675-9

Softcover

2014. XXII, 382 p.

\$49.99

ISBN 978-1-4471-4675-9

usually dispatched within 3 to 5 business days

A. Baldi, P. Pasquali, E.P. Spugnini (Eds.)

Skin Cancer

A Practical Approach

Skin Cancer: A Practical Approach presents a comprehensive and up to date overview on skin cancer. With an emphasis on practical aspects that will set the basis for guidelines of treatment, the volume presents different diagnostic tools to help physicians obtain the proper diagnosis. Written by a worldwide base of experts selected on their recognized expertise on the different themes discussed, Skin Cancer: A Practical Approach is a valuable resource for investigators in the field of skin cancer, including pathologists, medical and surgical oncologists, dermatologists, general surgeons, and veterinary oncologists

Features

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Contents

Embryology and Anatomy of the Skin.- Epidemiology And Prevention Of Cutaneous Tumors.- Cutaneous Squamous Cell Carcinoma: focus on biochemical and molecular characteristics.- Molecular Pathology Of Melanocytic Skin Cancer.- Basal Cell Carcinoma: molecular and pathological features.- Skin Adnexal tumors: a large spectrum of clinic-pathological lesions.- Pathology of Melanocytic Skin Tumors.- Pathology Of Other Skin Cancer.- Primary Cutaneous Lymphomas.- Comparative Oncology of Skin Cancer.- Clinical-pathological integration in the diagnosis of skin cancer.- Cytology.- Dermoscopy.-[...]

Fields of interest

Pathology; Dermatology; Surgical Oncology; General Practice / Family Medicine; General Surgery

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7356-5

Hardcover

2014. XIV, 569 p. 270 illus., 222 illus. in color. (Current Clinical Pathology)

\$239.00

ISBN 978-1-4614-7356-5

usually dispatched within 3 to 5 business days

M. Matucci-Cerinic, D. Furst, D. Fiorentino (Eds.)

Skin Manifestations in Rheumatic Disease

Rheumatologic diseases are highly associated with clinical symptoms of the skin, nails, and mucosal membranes. This book provides the practicing rheumatologist with a rapid, easy to consult reference to help interpret the nature of these cutaneous lesions and then quickly decide upon the appropriate follow-up tests. Utilizing an abundance of informative photographs, it contains all of the essential information needed for early diagnosis and treatment. This comprehensive guide properly orients the practitioner within the challenging world of rheumatologic disorders of the skin and gives insight into when consultation with a dermatologist is advisable.

Features

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Contents

Part I: Presentation of Skin Manifestation.- Approach to Patients with Skin Manifestations.- Chilblain Lupus Erythematosus.- Erythema Nodosum.- Livedo Reticularis.- Malar Erythema.- Purpura.- Telangiectasias.- Ulceration in Rheumatic Disease.- Panniculitis.- Diagnosing Puffy Fingers in the Rheumatic Patient.- Part II: Methodology.- Capillaroscopy.- Use of Biopsy.- Part III: Inflammatory Joint Disease.- Skin Manifestations of Juvenile Idiopathic Arthritis.- Psoriasis and Psoriatic Arthritis.- Inflammatory Bowel Associated Spondyloarthritis.- Nodules in Rheumatoid Arthritis.- Genital[...]

Fields of interest

Rheumatology; Internal Medicine; Dermatology

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-1-4614-7848-5

Softcover

2014. XVII, 410 p. 251 illus., 238 illus. in color.

\$99.00

ISBN 978-1-4614-7848-5

usually dispatched within 3 to 5 business days

A. Zini, McGill University, Montreal, Canada; A. Agarwal, Cleveland Clinic, Cleveland, USA (Eds.)

Sperm Chromatin for the Researcher

A Practical Guide

This concise, truncated version of Zini and Agarwal's Sperm Chromatin: Biological and Clinical Applications in Male Infertility and Assisted Reproduction offers select, research-oriented chapters for a handy, more affordable, state-of-the-art resource. Sperm Chromatin for the Researcher addresses such vital issues as: - Structure and function of human sperm chromatin - Biological determinants of sperm chromatin damage - Laboratory evaluation of sperm chromatin - Protocols to measure sperm chromatin damage Ideal for novice and experienced researchers alike, Sperm Chromatin for the Researcher contains all of the need-to-know information about these cutting-edge topics in reproductive medicine.

Features

This concise, truncated version of Zini and Agarwal's Sperm Chromatin: Biological and Clinical Applications in Male Infertility and Assisted Reproduction offers select, research-oriented chapters for a handy, more affordable, state-of-the-art resource. Sperm Chromatin for the Researcher addresses such vital issues as: - Structure and function of human sperm chromatin - Biological [...]

Contents

Part I: Human Sperm Chromatin: Structure and Function.- Sperm Chromatin: An Overview.- Sperm Nucleoproteins.- The Relationship Between Chromatin Structure and DNA Damage in Mammalian Spermatozoa.- Chromosome Positioning in Spermatozoa.- Sperm Mitochondrial DNA.- The Sperm Epigenome.- RNA Expression in Male Germ Cells During Spermatogenesis (Male Germ Cell Transcriptome).- Part II: Biological Determinants of Sperm Chromatin Damage.- Spermatogenesis: An Overview.- Role of Oxidative Stress in the Etiology of Sperm DNA Damage.- Abortive Apoptosis and Sperm Chromatin Damage.- Spermiogenesis[...]

Fields of interest

Reproductive Medicine; Urology / Andrology; Internal Medicine

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-1-4614-8458-5

Softcover

Contains selected chapters from Sperm Chromatin 2013. XIV, 438 p. 69 illus., 40 illus. in color.

\$99.00

ISBN 978-1-4614-8458-5

usually dispatched within 3 to 5 business days

F. Hartmann, G. Cucchi

Stress and Orality

New Data About Teeth Clenching & Outcomes, Migraine, Fibromyalgia, Fatigue

"The reading of STRESS and ORALITY written by F. HARTMANN and G. CUCCHI led me to believe that we should consider the problem of certain migraines, neck pain, fibromyalgia, and chronic fatigue from a radically different angle than the historically traditional approach." Pr Roger Guillemin (Nobel Laureate in Medicine) Are oral disorders only an issue for dentists? The answer is no. If your patients complain of pain and/or discomfort, if some are diagnosed as suffering from migraines, fibromyalgia or chronic fatigue, and if classical therapies have remained ineffective, this book could help in your daily practice. When it comes to the complex pathology called Temporo-Mandibular Disorders[...]

Features

"The reading of STRESS and ORALITY written by F. HARTMANN and G. CUCCHI led me to believe that we should consider the problem of certain migraines, neck pain, fibromyalgia, and chronic fatigue from a radically different angle than the historically traditional approach." Pr Roger Guillemin (Nobel Laureate in Medicine) Are oral disorders only an issue for dentists? The answer is no. If [...]

Contents

Authors' foreword.- General Introduction.- Diagnosis.- Introduction.- Symptoms Pain Location.- Nature, aggravating or relieving factors.- Resistance to drugs.- Discomforts.- Auditory problems.- Problems with swallowing and phonation.- Problems with posture and vision.- Fatigue and sleeping disorders.- Psychological mood disorders.- Prolonged unexplained fever.- Immuno-deficiency disorders.- Autonomic problems.- Problems with nutrition.- Objective signs.- Examination.- Extraoral examination.- Intraoral examination.- Palpation.- Extraoral palpation.- Intraoral palpation.- Listening.- [...]

Fields of interest

Medicine (general); Neurology; Gastroenterology

Target groups

Professional/practitioner

Type of publication

Monograph

More on www.springer.com/978-2-8178-0270-1

Hardcover

2014. XII, 300 p. 213 illus., 212 illus. in color.

\$189.00

ISBN 978-2-8178-0270-1

Due: October 28, 2013

M.R. Kibbe, Northwestern University, Chicago, USA; S.A. LeMaire, St Luke's Episcopal Hospital, Houston, USA (Eds.)

Success in Academic Surgery: Basic Science

Features

Academic surgeons play an essential role in advancing the field and improving the care of patients with surgical disease. As the Association for Academic Surgery (AAS) Fall Courses (www.aasurg.org) and international courses continue to evolve to address the rapidly expanding scope and complexity of academic surgery, there is a greater need for an accompanying textbook to supplement the material presented in [...]

Fields of interest

Medicine (general); Surgery; Medical Education

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-1-4471-4735-0

Softcover

2014. X, 242 p. 28 illus., 20 illus. in color. (Success in Academic Surgery)

\$59.99

ISBN 978-1-4471-4735-0

usually dispatched within 3 to 5 business days

A.J. Layon, Geisinger Health System, Danville, USA; A. Gabrielli, Shands Hospital at University of Florida, Gainesville, USA; W.A. Friedman, University of Florida, Gainesville, USA (Eds.)

Textbook of Neurointensive Care

This updated and refined new edition is the only book to provide a comprehensive approach to the intensive care of neurologically injured patients from the emergency room and ICU through the operating room and post-surgical period. It reviews neuroanatomy, neuroradiology, and neurophysiology, examines the neurological problems most frequently seen in intensive care, and describes the various types of neurosurgery. General issues are discussed, such as cardiac care, fluids and electrolytes, nutrition, and monitoring as well as more specific conditions and complications including elevated intracranial pressure, seizures, and altered mental states.

Features

Listening to an injured brain is not easy. It takes knowledge, dedication, and understanding of the critically ill patient and their family. It takes an appreciation of the logistics of care in these difficult times of imbalance between more and sicker patients and fewer medical specialists. The impact of the right personnel, whose interest and training is in neurocritical care, has shown [...]

Contents

Introduction.- Basic Neuroanatomy.- Basic Neuroradiology / Diagnostic Radiology.- Basic Neurophysiology.- CNS Disease: An Overview.- CNS Neoplasia.- CNS Vascular Disease.- Basic Endovascular Neurosurgery / Interventional Radiology.- CNS Trauma.- Spinal Neurosurgery.- Stereotactic And Functional Neurosurgery (including epilepsy).- Pediatric Neurosurgery.- CNS Infections.- Neurological Disorders / Emergencies.- Part 2: Neuro-Intensive Care: General Issues.- Pre-Hospital Care.- Brain Resuscitation after Cardiac Arrest.- The Airway, Ventilation, and Oxygenation.- Cardiac Care.- Fluid and [...]

Fields of interest

Intensive / Critical Care Medicine; Imaging / Radiology; Neuroradiology; Emergency Medicine; Neurology; Neurosurgery

Target groups

Professional/practitioner

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-1-4471-5225-5

Hardcover

2014. XXII, 988 p. 281 illus., 128 illus. in color.

\$189.00

ISBN 978-1-4471-5225-5

Due: September 28, 2013

H.P. Selker, J.S. Wasser (Eds.)

The Affordable Care Act as a National Experiment

Health Policy Innovations and Lessons

This book examines the landmark 2010 Patient Protection and Affordable Care Act (ACA) from the perspective of health policy research as translational science. It delineates a new perspective about the creation and potential impact of the ACA and guides the development of health policy that is supported by best evidence that, in turn, transforms into practice, policy, and public benefit. Told by those involved in the creation and implementation of the ACA, the book reviews the history and impact of this groundbreaking legislation and recommends priorities, objectives, and next steps for translational research as the ACA is implemented. The book includes coverage of these [...]

Features

This book examines the landmark 2010 Patient Protection and Affordable Care Act (ACA) from the perspective that health policy innovation is translational research directed at improving health. It delineates a new perspective about the creation and potential impact of the ACA and guides the development of health policy that is supported by best evidence that, in turn, transforms into practice, policy, and [...]

Contents

Introduction: The Affordable Care Act as a National Experiment.- Objectives of the ACA.- Delivering on the Promise of the Affordable Care Act.- What We Got (and What Might Have Been): A Distinctly American Approach.- Commentary to Section II: Conducting the Experiment.- The Affordable Care Act as an Experiment: Data We Have, Expect to Have, and Should Have, from a Vermont Pilot Study.- The Center for Medicare and Medicaid Innovation: Its Purpose, Processes, and Desired Outcomes.- The Dream of a National Health Information Technology Infrastructure.- Results from a Massachusetts Pilot [...]

Fields of interest

Medicine (general); Health Administration; Public Health; Health Promotion and Disease Prevention

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8350-2

Softcover

2014. XVI, 155 p. 37 illus., 29 illus. in color.

\$29.99

ISBN 978-1-4614-8350-2

usually dispatched within 3 to 5 business days

K. Shapiro, Animals and Society Institute, Inc., Washington Grove, USA; M.L. Randour, Animal Welfare Institute, Washington, USA; S. Krinsk, Child Protective Center, Sarasota, USA; J.L. Wolf

The Assessment and Treatment of Children Who Abuse Animals

The AniCare Child Approach

Empirical research has clearly demonstrated that animal abuse in childhood is associated with family violence and violent behavior towards humans in general. Such abuse is accordingly of increasing interest within human services and the criminal justice system. This handbook will serve as an ideal resource for therapists in social work, psychology, psychiatry, and allied fields who work with children who have abused animals. It provides step-by-step guidance on how to assess, develop appropriate treatment plans for, and treat children who commit animal abuse, based on the AniCare model developed by the Animals and Society Institute. Exercises cover the identification and expression of [...]

Features

Empirical research has clearly demonstrated that animal abuse in childhood is associated with family violence and violent behavior towards humans in general. Such abuse is accordingly of increasing interest within human services and the criminal justice system. This handbook will serve as an ideal resource for therapists in social work, psychology, psychiatry, and allied fields who work with children [...]

Contents

Context: Animal Abuse and Family Violence.- The Prevalence of Juvenile Animal Abuse.- Changing Attitudes Toward Animal Abuse. Theory: Attachment Theory.- Cognitive Behaviorism and Trauma-informed Narrative.- Psychodynamic Theory.- Assessment.- Diagnostic Categories Associated with Children Who Commit Animal Abuse.- Attention-Deficit and Disruptive Behavior Disorders.- Attachment Difficulties. Treatment.- Processing Therapist Reactions.- Joining the Client.- Framing the Therapy.- Animal-assisted Therapy.- Empathy.- Clinical Cases.- Empathy Development: Psychosocial Emotional Exercises.- [...]

Fields of interest

Psychiatry; Child and School Psychology; Psychotherapy; Psychology (general)

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-3-319-01088-5

Softcover

2014. XII, 124 p. 10 illus.

\$49.99

ISBN 978-3-319-01088-5

usually dispatched within 3 to 5 business days

T.A. Schweizer, St. Michael's Hospital, Toronto, Canada; L. MacDonald (Eds.)

The Behavioral Consequences of Stroke

A comprehensive, state-of-the-art contribution to a field that is rapidly developing, The Behavioral Consequences of Stroke provides a broad overview of the cognitive and neurobehavioral effects of stroke. As attention to paralysis and the more obvious physical disabilities stroke patients incur expands, greater attention is being paid today to the cognitive and neurobehavioral complications that impact stroke morbidity and even functional neurological recovery in patients. Written by an international panel of experts and edited by a neurosurgeon and by a cognitive neuroscientist, this unique title addresses the full range of issues relevant to the field, including epidemiology, [...]

Features

A comprehensive, state-of-the-art contribution to a field that is rapidly developing, The Behavioral Consequences of Stroke provides a broad overview of the cognitive and neurobehavioral effects of stroke. As attention to paralysis and the more obvious physical disabilities stroke patients incur expands, greater attention is being paid today to the cognitive and neurobehavioral complications that [...]

Contents

Stroke Epidemiology, Etiology, and Background.- Treatment of Stroke.- Sensorimotor Control after Stroke.- Limb Apraxia: Types, Neural Correlates, and Implications for Clinical Assessment and Function in Daily Living.- Spatial Neglect: Not Simply Disordered Attention.- Post-Stroke Aphasia.- Disorders of Emotional Communication after Stroke.- Dysexecutive Syndrome after Stroke.- Memory Loss after Stroke.- Behavior after Aneurysmal Subarachnoid Hemorrhage: Cognition and Functional Outcome.- Cognitive Dysfunction after Intracerebral Hemorrhage, Vasculitis, and Other Stroke Syndromes.- [...]

Fields of interest

Neurology; Surgery; Intensive / Critical Care Medicine; Internal Medicine; Primary Care Medicine; Neurosciences

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7671-9

Hardcover

2014. XVIII, 349 p. 50 illus., 33 illus. in color.

\$199.00

ISBN 978-1-4614-7671-9

usually dispatched within 3 to 5 business days

I.M. Shapiro, Thomas Jefferson University, Philadelphia, USA; M.V. Risbud, Thomas Jefferson University, Philadelphia, USA (Eds.)

The Intervertebral Disc

Molecular and Structural Studies of the Disc in Health and Disease

The intervertebral disc is a complex structure that separates opposing vertebrae, permits a wide range of motion, and accommodates high biomechanical forces. Disc degeneration leads to a loss of function and is often associated with excruciating pain. Written by leading scientists and clinicians, the first part of the book provides a review of the basic biology of the disc in health and disease. The second part considers strategies to mitigate the effects of disc degeneration and discusses the possibility of engineering replacement tissues. The final section is devoted to approaches to model normal development and elucidate the pathogenesis of degenerative disc disease using animal, [...]

Features

The intervertebral disc is composed of a complex tissue that separates neighboring vertebrae, permits a wide range of motion, and cushions the high biomechanical forces on the spine. Disc degeneration leads to a loss of function and is often associated with excruciating pain. Written by leading scientists and clinicians, this is the only book in the past fifty years devoted entirely to the study of [...]

Contents

Biomechanical and Molecular Studies of the Intervertebral Disc: Introduction to the Structure, Function and Comparative Anatomy of the Vertebrae and the Intervertebral Disc.- The Intervertebral Disc: Overview of Disc Mechanics.- Development of the Intervertebral Disc.- Proteoglycans of the Intervertebral Disc.- Collagen and Other Proteins of the Nucleus Pulposus, Annulus Fibrosus and Cartilage Endplates.- Microenvironmental Regulation of Cell Function and Extracellular Matrix Synthesis by Disc Cells.- The Effects of Mechanical Forces on Nucleus and Annulus Cells.- The Role of the ADAMTS [...]

Fields of interest

Surgical Orthopedics; Neurosurgery; Orthopedics

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-3-7091-1534-3

Hardcover

2014. X, 446 p. 130 illus., 42 illus. in color.

\$209.00

ISBN 978-3-7091-1534-3

usually dispatched within 3 to 5 business days

R.V. West, University of Pittsburgh Medical Center, Pittsburgh, USA; A.C. Colvin (Eds.)

The Patellofemoral Joint in the Athlete

Patellofemoral disorders are extremely prevalent in athletes and can lead to chronic pain, instability, weakness, and inconsistent or poor athletic performance. These disorders can be difficult to diagnose. Treatment options can vary depending upon several factors, including the sport and the time during the sports season when the symptoms occur. Treatment also varies depending on the age of the patient and their competition level. The Patellofemoral Joint in the Athlete provides an extensive review of the physical examination, radiographic evaluation, differential diagnoses, and treatment options of common patellofemoral disorders, including patellar chondrosis, pain and [...]

Features

Patellofemoral disorders are extremely prevalent in athletes and can lead to chronic pain, instability, weakness, and inconsistent or poor athletic performance. These disorders can be difficult to diagnose. Treatment options can vary depending upon several factors, including the sport and the time during the sports season when the symptoms occur. Treatment also varies depending on the age of the patient [...]

Contents

Anatomy of the Patellofemoral Joint.- Lateral Patella Dislocations: History, Physical Exam and Imaging.- Rehabilitation Considerations for Non-Operative Management of Patellofemoral Conditions.- Surgical Treatment of Patellar Instability in Skeletally Immature Athletes.- Cartilage Restoration in the Patellofemoral Joint.- MPFL Repair and Reconstruction.- Tibial Tubercle Osteotomies.- Patellofemoral Resurfacing Arthroplasty in the Active Patient.- Overview of Surgical Decision Making.

Fields of interest

Surgical Orthopedics; Sports Medicine; Rehabilitation

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-4156-4

Hardcover

2014. XII, 172 p. 125 illus., 63 illus. in color.

\$189.00

ISBN 978-1-4614-4156-4

usually dispatched within 3 to 5 business days

P. Astoul, Hôpital Nord, Marseille cedex 20, France; G. Tassi, Spedali Civili di Brescia, Brescia (BS), Italy; J.-M. Tschopp (Eds.)

Thoracoscopy for Pulmonologists

A Didactic Approach

There is an increasing need for medical thoracoscopy performed by pulmonologists, which may be video assisted and has the advantage of being very cost-effective. This book is a comprehensive and up-to-date guide to thoracoscopy for pulmonologists that documents the considerable progress in endoscopic telescopes and instrumentation. Clear practical guidance is provided on technique, and diagnostic, therapeutic, and interventional applications of thoracoscopy are all carefully examined with the aid of high-quality illustrations. Although medical thoracoscopy is much less invasive than thoracotomy, complications can occur in a small number of cases; these are discussed and advice on [...]

Features

The incidence of pleural disease is increasing, and it is now accepted that best practice requires the incorporation of thoracoscopy into the work-up. However, surgeons cannot meet the rising demand for thoracoscopy by means of video-assisted thoracoscopic surgery (VATS), and waiting lists for endoscopic pleural procedures are consequently lengthening. Against this background, there is an increasing need [...]

Contents

Part I The Pleura and Thoracoscopy Technique.- Part II Thoracoscopy for the Beginners.- Part III Interventional Thoracoscopy.- Part IV Advanced Thoracoscopy.- Part V Complications of Thoracoscopy and Management.- Part VI Future in the Field of Thoracoscopy.

Fields of interest

Thoracic Surgery; Surgery; Surgical Oncology; Pneumology/Respiratory System

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-3-642-38350-2

Hardcover

2014. XV, 266 p. 172 illus., 145 illus. in color.

\$189.00

ISBN 978-3-642-38350-2

Due: October 28, 2013

A. Rane, R. Dasgupta, Imperial College Health Care NHS Trust, London, United Kingdom (Eds.)

Urinary Tract Infection

Clinical Perspectives on Urinary Tract Infection

The causative organisms of Urinary Tract Infection are dynamic in terms of their virulence and resistance patterns, leading to challenges in the prevention and treatment of urinary infection. This is of relevance in both primary and secondary care, and many of the challenges are similar in both developed and developing countries alike. UTI is also associated with considerable cost in terms of morbidity, economic and research expenditure. Written by an exceptional and well-known team of clinical experts, the purpose of Urinary Tract Infections addresses key questions facing physicians about this condition. This book is written primarily for general physicians who wish to have a broad [...]

Features

The causative organisms of Urinary Tract Infection are dynamic in terms of their virulence and resistance patterns, leading to challenges in the prevention and treatment of urinary infection. This is of relevance in both primary and secondary care, and many of the challenges are similar in both developed and developing countries alike. UTI is also associated with considerable cost in terms of morbidity, [...]

Contents

Introduction.- Definitions, Classifications and Antibiotics.- Diagnosis and Management of Urinary Tract Infections.- Clinical Dilemmas.- TB, AIDS, and Uncommon UTIs.- UTI and Diabetes.- Catheter-related UTIs.- Complementary Therapy Strategies - Myths and Facts.- A Look to the Future.

Fields of interest

Urology / Andrology; Gynecology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4471-4708-4

Hardcover

2013. XIII, 77 p. 9 illus. in color.

\$139.00

ISBN 978-1-4471-4708-4

usually dispatched within 3 to 5 business days

M.H. Chang, National Taiwan University Hospital, Taipei, Taiwan;
K.-T. Jeang, National Institute of Allergy and Infect, Bethesda,
USA (Eds.)

Viruses and Human Cancer

From Basic Science to Clinical Prevention

Research on oncogenic viruses and related human cancers has advanced rapidly in the past decade. Most articles, however, focus on a specific oncogenic virus and cancer. There is consequently a need for a comprehensive, up-to-date monograph that offers broad and integrated knowledge. *Viruses and Human Cancer – From Basic Science to Clinical Prevention* is designed to meet this need by providing an advanced overview on the basic and clinical aspects of oncogenic viruses and the human cancers that they cause. Virology, virus-induced inflammation and tissue injuries, oncogenic mechanisms, epidemiology, and current and emerging preventive and therapeutic strategies are all discussed in [...]

Features

Research on oncogenic viruses and related human cancers has advanced rapidly in the past decade. Most articles, however, focus on a specific oncogenic virus and cancer. There is consequently a need for a comprehensive, up-to-date monograph that offers broad and integrated knowledge. *Viruses and Human Cancer – From Basic Science to Clinical Prevention* is designed to meet this need by providing an [...]

Contents

Virus infection and human cancer – An overview.- Epidemiology of virus infection and human cancer.- Viral oncogenes and human cancer.- Virus infection, inflammation and cancer prevention.- The oncogenic role of hepatitis B virus.- Prevention of hepatitis B virus infection and liver cancer.- The oncogenic role of hepatitis C virus.- Prevention of hepatitis C virus infection and liver cancer.- The oncogenic role of Human Papilloma virus.- Prevention of Human Papilloma virus and related cancers.- The oncogenic role of Epstein-Barr virus.- Prevention of Epstein-Barr virus infection and [...]

Fields of interest

Oncology; Cancer Research; Infectious Diseases; Microbiology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-3-642-38964-1

Hardcover

2014. VIII, 290 p. 26 illus., 14 illus. in color. (Recent Results in Cancer Research, Vol. 193)

\$189.00

ISBN 978-3-642-38964-1

usually dispatched within 3 to 5 business days

M. Holick, Boston University School of Medicine, Boston, USA
(Ed.)

Vitamin D

Physiology, Molecular Biology, and Clinical Applications, Volume 1

In *Vitamin D: Physiology, Molecular Biology, and Clinical Applications, Second Edition, Volume 1*, leading researchers provide a comprehensive, highly readable overview of the biological functions and clinical applications of vitamin D and its metabolites. Presented in a newly affordable softcover format this volume contains Parts IV through VII of the previously published hardcover text. Topics range from the most recent recommendations for vitamin D intake to new approaches for the treatment and prevention of vitamin D deficiency and the development of active vitamin D drugs to treat psoriasis and cancer. The book demonstrates the significant role that vitamin D has in maintaining [...]

Features

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Contents

Vitamin D and Health: Evolution, Biologic Functions, and Recommended Dietary Intakes for Vitamin D.- Photobiology of Vitamin D.- The Functional Metabolism and Molecular Biology of Vitamin D Action.- Metabolism and Catabolism of Vitamin D, Its Metabolites and Clinically Relevant Analogs.- The Molecular Biology of the Vitamin D Receptor.- VDR and RXR Subcellular Trafficking.- Mechanism of Action of 1,25-Dihydroxyvitamin D₃ on Intestinal Calcium Absorption and Renal Calcium Transport.- Biological and Molecular Effects of Vitamin D on Bone.- Biological and Molecular Effects of Vitamin D [...]

Fields of interest

Clinical Nutrition; Nutrition; Endocrinology; Internal Medicine; Biochemistry; Cell Biology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-6048-0

Softcover

2013. XXIV, 612 p. 131 illus., 7 illus. in color. (Nutrition and Health)

\$119.00

ISBN 978-1-4614-6048-0

usually dispatched within 3 to 5 business days

M.F. Holick, Boston University, East Newton, USA (Ed.)

Vitamin D

Physiology, Molecular Biology, and Clinical Applications, Volume 2

In *Vitamin D: Physiology, Molecular Biology, and Clinical Applications, Second Edition, Volume 1*, leading researchers provide a comprehensive, highly readable overview of the biological functions and clinical applications of vitamin D and its metabolites. Presented in a newly affordable softcover format this volume contains Parts IV through VII of the previously published hardcover text. Topics range from the most recent recommendations for vitamin D intake to new approaches for the treatment and prevention of vitamin D deficiency and the development of active vitamin D drugs to treat psoriasis and cancer. The book demonstrates the significant role that vitamin D has in maintaining [...]

Features

In *Vitamin D: Physiology, Molecular Biology, and Clinical Applications, Second Edition, Volume 2*, leading researchers provide a comprehensive, highly readable overview of the biological functions and clinical applications of vitamin D and its metabolites. Presented in a newly affordable softcover format this volume contains Parts IV through VII of the previously published hardcover text. Topics range [...]

Contents

Vitamin D Deficiency in Pregnancy and Lactation and Health Consequences.- Vitamin D Deficiency in Children and Its Health Consequences.- Dietary Calcium Deficiency and Rickets.- Vitamin D in Fracture Prevention and Muscle Function and Fall Prevention.- Inherited Defects of Vitamin D Metabolism.- Molecular Defects in the Vitamin D Receptor Associated with Hereditary 1,25-Dihydroxyvitamin D-Resistant Rickets (HVDRR).- Receptor-Independent Vitamin D Resistance in Subhuman and Human Primates.- 25-Hydroxyvitamin 1 α -Hydroxylase: Studies in Mouse Models and Implications for Human Disease.- The [...]

Fields of interest

Clinical Nutrition; Nutrition; Endocrinology; Internal Medicine; Biochemistry; Cell Biology

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-6054-1

Softcover

2013. XXIV, 543 p. 112 illus., 14 illus. in color. (Nutrition and Health)

\$119.00

ISBN 978-1-4614-6054-1

usually dispatched within 3 to 5 business days

Philosophy

D. Koehn, University of St. Thomas, St. Paul, USA; D. Elm, University of St. Thomas, St. Paul, USA (Eds.)

Aesthetics and Business Ethics

Ludwig Wittgenstein famously said, "Ethics is aesthetics." It is unclear what such a claim might mean and whether it is true. This book explores contentious issues arising at the interface of ethics and aesthetics. The contributions reflect on the status of aesthetic ethical judgments, the relation of aesthetic beauty and ethical goodness and art and character development. The book further considers the potential role art could play in ethical analysis and in the classroom and explores in what respects aesthetics and ethics might be intertwined and even mutually supportive.

Features

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Contents

Part One: Aesthetical Dimensions of Ethical Judgments in Business.- 1. Literature, Emotions and Ethical Judgments in Business; Ron Duska.- 2. Literature and the Canonical Values of Capitalism; Christopher Michaelson.- Part Two: The Aesthetic Firm.- 3. The Impoverished Aesthetic of Modern Management: Beauty and Ethics in Organization; Steven Saylor.- An Aesthetic Theory of the Firm; John Dobson.- Part Three: Art and Personal Development.- 5. Business Ethics and the Arts: Character and Process; Dawn Elm.- 6. Wisdom, Management, and Responsibility: Aesthetics, Moral Imagination, and [...]

Fields of interest

Ethics; Business & Management Science; Arts Education; Humanities

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7069-0

Hardcover

2014. IX, 159 p. 9 illus., 8 illus. in color. (Issues in Business Ethics, Vol. 41)

\$129.00

ISBN 978-94-007-7069-0

usually dispatched within 3 to 5 business days

R. Brown, LaGuardia Community College, CUNY, Long Island City, USA (Ed.)

Consciousness Inside and Out: Phenomenology, Neuroscience, and the Nature of Experience

This volume is product of the third online consciousness conference, held at <http://consciousnessonline.com> in February and March 2011. Chapters range over epistemological issues in the science and philosophy of perception, what neuroscience can do to help us solve philosophical issues in the philosophy of mind, what the true nature of black and white vision, pain, auditory, olfactory, or multi-modal experiences are, to higher-order theories of consciousness, synesthesia, among others. Each chapter includes a target article, commentaries, and in most cases, a final response from the author. Though wide-ranging all of the papers aim to understand consciousness both from the inside, as [...]

Features

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Contents

Chp. 1 Richard Brown "Introduction".- I. First-Person Data and the Science of Consciousness.- Chp. 2. Ruth Millikan "An Epistemology for Phenomenology?".- Chp. 3. Gualtiero Piccinini & Corey J. Maley "From Phenomenology to the Self-Measurement Methodology of First-Person Data".- II. Phenomenal Properties and Dualism.- Chp. 4. Paul Churchland "Consciousness and the Introspection of Apparent Qualitative Simples".- Chp. 5. Torin Alter "Churchland on arguments against physicalism".- Chp. 6. Paul Churchland "Response to Torin Alter".- III. Property Dualism and Panpsychism.- Chp. 7. Philip [...]

Fields of interest

Philosophy of Mind; Neurosciences; Computer Imaging, Vision, Pattern Recognition and Graphics

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-6000-4

Hardcover

2014. VII, 457 p. 29 illus., 16 illus. in color. (Studies in Brain and Mind, Vol. 6)

\$179.00

ISBN 978-94-007-6000-4

usually dispatched within 3 to 5 business days

G. Barker, E. Desjardins, T. Pearce, University of Wisconsin-Madison, Madison, USA (Eds.)

Entangled Life

Organism and Environment in the Biological and Social Sciences

This volume explores the interactions between organisms and their environments and how this "entanglement" is a fundamental aspect of all life. It brings together the work and ideas of historians, philosophers, biologists, and social scientists, uniting a range of new perspectives, methods, and frameworks for examining and understanding the ways that organisms and environments interact. The volume is organized into three main sections: historical perspectives, contested models, and emerging frameworks. The first section explores the origins of the modern idea of organism-environment interaction in the mid-nineteenth century and its development by later psychologists and [...]

Features

This volume explores the interactions between organisms and their environments and how this "entanglement" is a fundamental aspect of all life. It brings together the work and ideas of historians, philosophers, biologists, and social scientists, uniting a range of new perspectives, methods, and frameworks for examining and understanding the ways that organisms and environments interact. The volume [...]

Contents

Introduction: Perspectives on Entangled Life; Gillian Barker, Eric Desjardins, and Trevor Pearce.- Part I. Historical Perspectives.- The Origins and Development of the Idea of Organism-Environment Interaction; Trevor Pearce.- James Mark Baldwin, the Baldwin Effect, Organic Selection, and the American "Immigrant Crisis" at the Turn of the Twentieth Century; Christopher D. Green.- The Tension between the Psychological and Ecological Sciences: Making Psychology More Ecological; Harry Heft.- New Perspectives on Organism-Environment Interaction in Anthropology; Emily A. Schultz.- Part II. [...]

Fields of interest

Philosophy of Biology; Evolutionary Biology; History of Science

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7066-9

Hardcover

2014. VI, 279 p. 15 illus. (History, Philosophy and Theory of the Life Sciences, Vol. 4)

\$179.00

ISBN 978-94-007-7066-9

usually dispatched within 3 to 5 business days

M.C. Galavotti, E. Nemeth, F. Stadler (Eds.)

F. Schuppert, Queen's University Belfast, Belfast, United Kingdom

L. Magnani, University of Pavia, Pavia, Italy (Ed.)

European Philosophy of Science - Philosophy of Science in Europe and the Viennese Heritage

This volume combines the theoretical and historical perspective focusing on the specific features of a European philosophy of science. On the occasion of the 20th anniversary of the Institute Vienna Circle the Viennese roots and influences will be addressed, in addition. There is no doubt that contemporary philosophy of science originated mainly in Europe beginning in the 19th century and has influenced decisively the subsequent development of globalized philosophy of science, esp. in North America. Recent research in this field documents some specific characteristics of philosophy of science covering the natural, social, and also cultural sciences in the European context up to the [...]

Features

This volume combines the theoretical and historical perspective focusing on the specific features of a European philosophy of science. On the occasion of the 20th anniversary of the Institute Vienna Circle the Viennese roots and influences will be addressed, in addition. There is no doubt that contemporary philosophy of science originated mainly in Europe beginning in the 19th century and has influenced [...]

Contents

Editorial.- From the Vienna Circle to the Institute Vienna Circle: On the Viennese Legacy in Contemporary Philosophy of Science; Friedrich Stadler.- I.- A Matter of Substance? Gaston Bachelard on Chemistry's Philosophical Lessons; Cristina Chimisso.- Carnap's Aufbau and Physicalism: What Does the "Mutual Reducibility" of Psychological and Physical Objects Amount to?; Thomas Uebel.- On the Relationship between Neuroscience and Philosophy: the Case of Sleep and Dreaming; Claude Debru.- Metaphysics in the Thirties: And Why Should Anyone Care Now? Richard Creath.- II.- Probabilistic[...]

Fields of interest

Philosophy of Science; History of Philosophy; Modern Philosophy

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-3-319-01898-0

Hardcover

2014. VIII, 401 p. 7 illus. (Vienna Circle Institute Yearbook, Vol. 17)

\$179.00

ISBN 978-3-319-01898-0

usually dispatched within 3 to 5 business days

Freedom, Recognition and Non-Domination

A Republican Theory of (Global) Justice

This book offers an original account of a distinctly republican theory of social and global justice. The book starts by exploring the nature and value of Hegelian recognition theory. It shows the importance of that theory for grounding a normative account of free and autonomous agency. It is this normative account of free agency which provides the groundwork for a republican conception of social and global justice, based on the core-ideas of freedom as non-domination and autonomy as non-alienation. As the author argues, republicans should endorse a sufficientarian account of social justice, which focuses on the nature of social relationships and their effects on people's ability to [...]

Features

This book offers an original account of a distinctly republican theory of social and global justice. The book starts by exploring the nature and value of Hegelian recognition theory. It shows the importance of that theory for grounding a normative account of free and autonomous agency. It is this normative account of free agency which provides the groundwork for a republican conception of social and [...]

Contents

Acknowledgments.- Introduction - A Republican Theory of (Global) Justice.- Chapter One: The Nature of Free Rational Agency.- Chapter Two: Analysing Freedom & Autonomy - Recognition, Responsibility and Threats to Agency.- Chapter Three: Needs, Interests and Rights.- Chapter Four: Capabilities, Freedom and Sufficiency.- Chapter Five: Collective Agency, Democracy and Political Institutions.- Chapter Six: Global Justice and Non-Domination.- Conclusion: Freedom, Recognition & Non-Domination.- Bibliography.- Index.

Fields of interest

Political Philosophy; Political Science, general; Theories of Law, Philosophy of Law, Legal History; Ethics; Philosophy of Law

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-6805-5

Hardcover

2014. XXI, 201 p. (Studies in Global Justice, Vol. 12)

\$129.00

ISBN 978-94-007-6805-5

usually dispatched within 3 to 5 business days

Model-Based Reasoning in Science and Technology

Theoretical and Cognitive Issues

This book contains contributions presented during the international conference on Model-Based Reasoning (MBR'012), held on June 21-23 in Sestri Levante, Italy. Interdisciplinary researchers discuss in this volume how scientific cognition and other kinds of cognition make use of models, abduction, and explanatory reasoning in order to produce important or creative changes in theories and concepts. Some of the contributions analyzed the problem of model-based reasoning in technology and stressed the issues of scientific and technological innovation. The book is divided in three main parts: models, mental models, representations; abduction, problem solving and practical reasoning; [...]

Features

This book contains contributions presented during the international conference on Model-Based Reasoning (MBR'012), held on June 21-23 in Sestri Levante, Italy. Interdisciplinary researchers discuss in this volume how scientific cognition and other kinds of cognition make use of models, abduction, and explanatory reasoning in order to produce important or creative changes in theories and concepts. Some of [...]

Contents

Models, Mental models, Representations.- Abduction, Problem solving and Practical reasoning.- Historical, Epistemological and Technological issues.

Fields of interest

Philosophy of Science; Cognitive Psychology; Simulation and Modeling; Epistemology; Philosophy of Mind

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-37427-2

Hardcover

2014. XII, 639 p. 79 illus., 4 illus. in color. (Studies in Applied Philosophy, Epistemology and Rational Ethics, Vol. 8)

\$349.00

ISBN 978-3-642-37427-2

usually dispatched within 3 to 5 business days

K. Niazi, Berkeley, Berkeley, USA

Quḥb al-Dīn Shīrāzī and the Configuration of the Heavens

A Comparison of Texts and Models

As a leading scientist of the 13th century C. E. Quḥb al-Dīn Shīrāzī wrote three substantial works on hay'a (or the configuration of the celestial orbs): Nihāyat al-idrāk fi dirāyat al-aflāk ("The Limits of Attainment in the Understanding of the Heavens"), al-Tuḥfa al-shāhiya fi 'ilm al-hay'a ("The Royal Offering Regarding the Knowledge of the Configuration of the Heavens"), and Ikhtiyārāt-i Muḥaffari ("The Muḥaffari Elections"). Completed in less than four years and written in two of the classical languages of the Islamic world, Arabic and Persian, these works provide a fascinating window to the astronomical research carried out in Ilkhanid Persia. Shīrāzī and his colleagues were[...]

Features

As a leading scientist of the 13th century C. E. Quḥb al-Dīn Shīrāzī wrote three substantial works on hay'a (or the configuration of the celestial orbs): Nihāyat al-idrāk fi dirāyat al-aflāk ("The Limits of Attainment in the Understanding of the Heavens"), al-Tuḥfa al-shāhiya fi 'ilm al-hay'a ("The Royal Offering Regarding the Knowledge of the Configuration of the Heavens"), and [...]

Contents

Acknowledgement.- Note on Transliteration.- Chapter 1. Purpose and Background of Study.- Chapter 2. The Mongols in Iran.- Chapter 3. Shirazi's Life.- Chapter 4. The Principal Astronomical Sources.- Chapter 5. Persian vs. Arabic: Language as a Determinant of Content.- Chapter 6. Conclusion.- Figures.- Bibliography.- Appendix A.- Appendix B.- Appendix C.- Appendix D.- Appendix E.- Index.

Fields of interest

Philosophy of Science; History of Science; Non-Western Philosophy

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-6998-4

Hardcover

2014. XIII, 189 p. 30 illus. (Archimedes, Vol. 35)

\$129.00

ISBN 978-94-007-6998-4

usually dispatched within 3 to 5 business days

F. Ibekwe-SanJuan, ELICO – University of Lyon 3, Lyon, France; Th.M. Dousa (Eds.)

Theories of Information, Communication and Knowledge

A Multidisciplinary Approach

This book addresses some of the key questions that scientists have been asking themselves for centuries: what is knowledge? What is information? How do we know that we know something? How do we construct meaning from the perceptions of things? Although no consensus exists on a common definition of the concepts of information and communication, few can reject the hypothesis that information – whether perceived as « object » or as « process » – is a pre-condition for knowledge. Epistemology is the study of how we know things (anglophone meaning) or the study of how scientific knowledge is arrived at and validated (francophone conception). To adopt an epistemological stance is to commit[...]

Features

This book addresses some of the key questions that scientists have been asking themselves for centuries: what is knowledge? What is information? How do we know that we know something? How do we construct meaning from the perceptions of things? Although no consensus exists on a common definition of the concepts of information and communication, few can reject the hypothesis that information – whether [...]

Contents

Introduction; Fidelia Ibekwe-SanJuan and Thomas Dousa.- Chapter 1: Cybersemiotics: A new foundation for transdisciplinary theory of information, cognition, meaning, communication and consciousness; Søren Brier.- Chapter 2: Epistemology and the Study of Social Information within the Perspective of a Unified Theory of Information; Wolfgang Hofkirchner.- Chapter 3: Perception and Testimony as Data Providers; Luciano Floridi.- Chapter 4: Human communication from the semiotic perspective; Winfried Nöth.- Chapter 5: Mind the gap: transitions between concepts of information in varied domains; [...]

Fields of interest

Epistemology; Philosophy of Science; Philosophy of the Social Sciences

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-6972-4

Hardcover

2014. VI, 331 p. 46 illus., 18 illus. in color. (Studies in History and Philosophy of Science, Vol. 34)

\$179.00

ISBN 978-94-007-6972-4

usually dispatched within 3 to 5 business days

Physics

A.S. Sanz, CSIC Madrid, Madrid, Spain; S. Miret-Artés

A Trajectory Description of Quantum Processes. II. Applications

A Bohmian Perspective

Trajectory-based formalisms are an intuitively appealing way of describing quantum processes because they allow the use of "classical" concepts. Beginning as an introductory level suitable for students, this two-volume monograph presents (1) the fundamentals and (2) the applications of the trajectory description of basic quantum processes. This second volume is focussed on simple and basic applications of quantum processes such as interference and diffraction of wave packets, tunneling, diffusion and bound-state and scattering problems. The corresponding analysis is carried out within the Bohmian framework. By stressing its interpretational aspects, the book leads the reader to an [...]

Features

Trajectory-based formalisms are an intuitively appealing way of describing quantum processes because they allow the use of "classical" concepts. Beginning as an introductory level suitable for students, this two-volume monograph presents (1) the fundamentals and (2) the applications of the trajectory description of basic quantum processes. This second volume is focussed on simple and basic applications of [...]

Contents

Wave-Packet Dynamics: The Free-Particle Physics.- Quantum Interference and Superposition.- Interference and Interferometry.- Bound System Dynamics.- Tunneling Dynamics.- Atom Scattering from Periodic Surfaces.- Scattering from Surface Defects and Activated Diffusion.- Many-Body Systems and Quantum Hydrodynamics.- Epilogue.- Index.

Fields of interest

Physics (general); Theoretical, Mathematical and Computational Physics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-17973-0

Softcover

2014. XIX, 333 p. 100 illus., 68 illus. in color. (Lecture Notes in Physics, Vol. 831)

\$89.99

ISBN 978-3-642-17973-0

usually dispatched within 3 to 5 business days

D. Schulze-Makuch, Washington State University, Pullman, USA

P. de Aquino, Katholieke Universiteit Leuven, Leuven, Belgium

A. Charnukha, Max Planck Institute for Solid, Stuttgart, Germany

Alien Encounter

A Scientific Novel

It has been nearly 100 years since the Apollo moon landings, when Jack and Vladimir, two astronauts on a mission to Venus, discover a mysterious void related to indigenous life on the planet. Subsequently more voids are detected on Earth, Mars, Titan, and, quite ominously, inside a planetoid emerging from the Kuiper belt. Jack is sent to investigate the voids in the Solar System and intercept the planetoid - which, as becomes increasingly clear, is inhabited by alien life forms. Jack and his crew will have little time to understand their alien biochemistry, abilities, behavior patterns, resilience, and technology, but also how these life forms relate to the voids. Humankind's first[...]

Features

It has been nearly 100 years since the Apollo moon landings, when Jack and Vladimir, two astronauts on a mission to Venus, discover a mysterious void related to indigenous life on the planet. Subsequently more voids are detected on Earth, Mars, Titan, and, quite ominously, inside a planetoid emerging from the Kuiper belt. Jack is sent to investigate the voids in the Solar System and intercept the [...]

Contents

Part I: The Novel.- Alien Encounter.- Part II: The Science Behind the Fiction.

Fields of interest

Astrobiology; Popular Science in Astronomy; Planetary; Extraterrestrial Physics, Space Sciences

Target groups

Popular/general

Type of publication

Popular science

More on www.springer.com/978-3-319-01960-4

Softcover

Originally published as self-publication, Pullman, 2008 2014. XI, 236 p. 1 illus. (Science and Fiction)

\$19.99

ISBN 978-3-319-01960-4

usually dispatched within 3 to 5 business days

Beyond Standard Model Phenomenology at the LHC

This thesis provides an introduction to the physics of the Standard Model and beyond, and to the methods used to analyse Large Hadron Collider (LHC) data. The 'hierarchy problem', astrophysical data and experiments on neutrinos indicate that new physics can be expected at the now accessible TeV scale. This work investigates extensions of the Standard Model with gravitons and gravitinos (in the context of supergravity). The production of these particles in association with jets is studied as one of the most promising avenues for researching new physics at the LHC. Advanced simulation techniques and tools, such as algorithms allowing the computation of Feynman graphs and helicity[...]

Features

This thesis provides an introduction to the physics of the Standard Model and beyond, and to the methods used to analyse Large Hadron Collider (LHC) data. The 'hierarchy problem', astrophysical data and experiments on neutrinos indicate that new physics can be expected at the now accessible TeV scale. This work investigates extensions of the Standard Model with gravitons and gravitinos (in the context of [...])

Contents

Introduction.- The Standard Model.- Gravitation in Beyond Standard Model theories.- The LHC and collision simulations.- Phenomenology of graviton production.- Gravitino production at the LHC.- Epilogue.- Massless graviton implementation.- New routines for ADD theories in MadGraph.- ALOHA.

Fields of interest

Elementary Particles, Quantum Field Theory; Quantum Field Theories, String Theory; Cosmology; Mathematical Physics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00761-8

Hardcover

2014. XIII, 158 p. 50 illus., 25 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-00761-8

usually dispatched within 3 to 5 business days

Charge Dynamics in 122 Iron-Based Superconductors

This thesis combines highly accurate optical spectroscopy data on the recently discovered iron-based high-temperature superconductors with an incisive theoretical analysis. Three outstanding results are reported: (1) The superconductivity-induced modification of the far-infrared conductivity of an iron arsenide with minimal chemical disorder is quantitatively described by means of a strong-coupling theory for spin fluctuation mediated Cooper pairing. The formalism developed in this thesis also describes prior spectroscopic data on more disordered compounds. (2) The same materials exhibit a sharp superconductivity-induced anomaly for photon energies around 2.5 eV, two orders of [...]

Features

This thesis combines highly accurate optical spectroscopy data on the recently discovered iron-based high-temperature superconductors with an incisive theoretical analysis. Three outstanding results are reported: (1) The superconductivity-induced modification of the far-infrared conductivity of an iron arsenide with minimal chemical disorder is quantitatively described by means of a strong-coupling theory [...]

Contents

Introduction.- Iron-based superconductors.- Experimental and theoretical methods.- Results and discussion.- Summary.

Fields of interest

Strongly Correlated Systems, Superconductivity; Spectroscopy and Microscopy; Optical and Electronic Materials; Nanoscale Science and Technology; Nanotechnology

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01191-2

Hardcover

2014. XI, 130 p. 43 illus., 24 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-01191-2

usually dispatched within 3 to 5 business days

W. Paolini

Choosing and Using Astronomical Eyepieces

A valuable reference that fills a number of niches including that of a buyer's guide, technical desk reference and observer's field guide. It documents the past market and its evolution, right up to the present day. In addition to appealing to practical astronomers - and potentially saving them money - it is useful both as a historical reference and as a detailed review of the current market place for this bustling astronomical consumer product. What distinguishes this book from other publications on astronomy is the involvement of observers from all aspects of the astronomical community, and also the major manufacturers of equipment. It not only catalogs the technical aspects of the [...]

Features

This valuable reference fills a number of needs in the field of astronomical eyepieces, including that of a buyer's guide, observer's field guide and technical desk reference. It documents the past market for eyepieces and its evolution right up to the present day. In addition to appealing to practical astronomers - and potentially saving them money - it is useful both as a historical reference and as a [...]

Contents

Preface.- Part I: Background.- Chapter 1: Introducing the Astronomical Eyepiece.- Chapter 2: Choosing Eyepieces and Observing Strategies.- Chapter 3: Eyepieces for Celestial Targets and Accessories.- Chapter 4: Popular Eyepieces by AFOV Class.- Chapter 5: Advice from the Amateur Astronomer Community.- Part II: Desk Reference of Astronomical Eyepieces.- Chapter 6: How to Use This Guide.- Chapter 7: Agena to Docter.- Chapter 8: Edmund Scientific to Nikon.- Chapter 9: Olivon to Surplus Shed.- Chapter 10: Takahashi to Zooming Eyepieces.- Appendix A: Formulas and Optical Design Data.- [...]

Fields of interest

Astronomy, Observations and Techniques; Popular Science in Astronomy; Microwaves, RF and Optical Engineering

Target groups

Popular/general

Type of publication

Popular science

More on www.springer.com/978-1-4614-7722-8

Softcover

2013. XVIII, 442 p. 268 illus., 51 illus. in color. (The Patrick Moore Practical Astronomy Series)

\$44.99

ISBN 978-1-4614-7722-8

usually dispatched within 3 to 5 business days

M. Cristelli, Università di Roma, Rome, Italy

Complexity in Financial Markets

Modeling Psychological Behavior in Agent-Based Models and Order Book Models

Tools and methods from complex systems science can have a considerable impact on the way in which the quantitative assessment of economic and financial issues is approached, as discussed in this thesis. First it is shown that the self-organization of financial markets is a crucial factor in the understanding of their dynamics. In fact, using an agent-based approach, it is argued that financial markets' stylized facts appear only in the self-organized state. Secondly, the thesis points out the potential of so-called big data science for financial market modeling, investigating how web-driven data can yield a picture of market activities: it has been found that web query volumes[...]

Features

Tools and methods from complex systems science can have a considerable impact on the way in which the quantitative assessment of economic and financial issues is approached, as discussed in this thesis. First it is shown that the self-organization of financial markets is a crucial factor in the understanding of their dynamics. In fact, using an agent-based approach, it is argued that financial markets' [...]

Contents

Introduction.- Stylized Facts.- Agent-Based Modeling.- Critical Review of Agent-Based Models.- A Minimal Agent-Based Model.- Financial Market Dynamics: Order Book and Data Analysis.- Order Book: Introduction and Main Statistical Evidences.- Zero Intelligence Model for the Order Book Dynamics.- Evidences of strategic placements of orders.- Quantitative Analysis of Technical Trading.- Universal Relation between Skewness and Kurtosis.- Web Queries Can Predict Stock Market Volumes.- A Metric for the Economic Complexity.- Theory of Economic growth.

Fields of interest

Socio- and Econophysics, Population and Evolutionary Models; Economic Theory; Data Mining and Knowledge Discovery; Complex Systems; Game Theory, Economics, Social and Behav. Sciences

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00722-9

Hardcover

2014. XIX, 216 p. 95 illus., 33 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-00722-9

usually dispatched within 3 to 5 business days

B. Heber, Christian Albrechts Universität zu Kiel, Kiel, Germany; J. Kota, University of Arizona, Tucson, USA; R. Steiger, International Space Science Institute, Bern, Switzerland (Eds.)

Cosmic Rays in the Heliosphere

Temporal and Spatial Variations

Presents a comprehensive synopsis of the current state of cosmic rays, their modulation and their effects in the Earth's atmosphere. Leading scientists in the field assess the current state of our understanding of the spatial and temporal variations of galactic and anomalous cosmic rays in the Heliosphere, and their relation to effects of the Sun. The main objective is to understand the spatial and temporal variation of galactic and anomalous cosmic rays in the light of recent observations, theory and modeling by identifying the key mechanism(s) of cosmic ray modulation and how changes on the Sun relate to changes in the observed characteristics of cosmic rays in the Heliosphere; [...]

Features

Leading scientists in the field assess the current state of our understanding of the spatial and temporal variations of galactic and anomalous cosmic rays in the Heliosphere, and their relation to effects of the Sun. The main objective is to understand the spatial and temporal variation of galactic and anomalous cosmic rays in the light of recent observations, theory and modeling by identifying the key [...]

Contents

From the Contents: Solar Drivers of 11-yr and Long-Term Cosmic Ray Modulation.- Time-Variability in the Interstellar Boundary Conditions of the Heliosphere: Effect of the Solar Journey on the Galactic Cosmic Ray Flux at Earth.- Cosmic-Ray Energy Spectra and Time Variations in the Local Interstellar Medium: Constraints and Uncertainties.

Fields of interest

Extraterrestrial Physics, Space Sciences; Atmospheric Sciences

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-9199-6

Hardcover

Originally published as volume 176/1-4 in the series: Space Science Reviews

2014. VI, 403 p. (Space Sciences Series of ISSI, Vol. 43)

\$179.00

ISBN 978-1-4614-9199-6

usually dispatched within 3 to 5 business days

G. Paoletti, LIP6 - (Université Paris 6) UPMC, PARIS CEDEX 05, France

Deterministic Abelian Sandpile Models and Patterns

The model investigated in this work, a particular cellular automaton with stochastic evolution, was introduced as the simplest case of self-organized-criticality, that is, a dynamical system which shows algebraic long-range correlations without any tuning of parameters. The author derives exact results which are potentially also interesting outside the area of critical phenomena. Exact means also site-by-site and not only ensemble average or coarse graining. Very complex and amazingly beautiful periodic patterns are often generated by the dynamics involved, especially in deterministic protocols in which the sand is added at chosen sites. For example, the author studies the appearance[...]

Features

The model investigated in this work, a particular cellular automaton with stochastic evolution, was introduced as the simplest case of self-organized-criticality, that is, a dynamical system which shows algebraic long-range correlations without any tuning of parameters. The author derives exact results which are potentially also interesting outside the area of critical phenomena. Exact means also [...]

Contents

Introduction.- The Abelian Sandpile Model.- Algebraic structure.- Identity characterization.- Pattern formation.- Conclusions.- SL(2, Z).- Complex notation for vectors in R².- Generalized quadratic B'ezier curve.- Tessellation.

Fields of interest

Statistical Physics, Dynamical Systems and Complexity; Numerical and Computational Physics; Mathematical Physics; Probability Theory and Stochastic Processes; Simulation and Modeling

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01203-2

Hardcover

2014. XII, 163 p. 64 illus., 33 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-01203-2

usually dispatched within 3 to 5 business days

F. Abergel, École Centrale Paris, Châtenay-Malabry, France; H. Aoyama, Kyoto University, Kyoto, Japan; B.K. Chakrabarti, A. Chakraborti, A. Ghosh, Saha Institute of Nuclear Physics, Kolkata, India (Eds.)

Econophysics of Agent-Based Models

The primary goal of this book is to present the research findings and conclusions of physicists, economists, mathematicians and financial engineers working in the field of "Econophysics" who have undertaken agent-based modelling, comparison with empirical studies and related investigations. Most standard economic models assume the existence of the representative agent, who is "perfectly rational" and applies the utility maximization principle when taking action. One reason for this is the desire to keep models mathematically tractable: no tools are available to economists for solving non-linear models of heterogeneous adaptive agents without explicit optimization. In contrast,[...]

Features

The primary goal of this book is to present the research findings and conclusions of physicists, economists, mathematicians and financial engineers working in the field of "Econophysics" who have undertaken agent-based modelling, comparison with empirical studies and related investigations. Most standard economic models assume the existence of the representative agent, who is "perfectly rational" and [...]

Contents

Agent-based modeling of zapping behavior of viewers, television commercial allocation, and advertisement markets by Hiroyuki Kyan and Jun-ichi Inoue.- Agent based modeling of Housing asset bubble: A simple utility function based investigation by Kausik Gangopadhyay and Kousik Guhathakurta.- Urn model-based adaptive Multi-arm clinical trials: A stochastic approximation approach by Sophie Laruelle and Gilles Pagès.- Logistic modeling of a Religious Sect features by Marcel Ausloos.- Characterizing financial crisis by means of the three states random field Ising model by Mitsuaki Murota and[...]

Fields of interest

Socio- and Econophysics, Population and Evolutionary Models; Game Theory, Economics, Social and Behav. Sciences; Business & Economics (general); Game Theory / Mathematical Methods

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-00022-0

Hardcover

2014. VIII, 302 p. 91 illus. (New Economic Windows)

\$199.00

ISBN 978-3-319-00022-0

usually dispatched within 3 to 5 business days

S.D. Littlejohn, University of Bath, Bath, United Kingdom

Electrical Properties of Graphite Nanoparticles in Silicone

Flexible Oscillators and Electromechanical Sensing

This thesis examines a novel class of flexible electronic material with great potential for use in the construction of stretchable amplifiers and memory elements. Most remarkably the composite material produces spontaneous oscillations that increase in frequency when pressure is applied to it. In this way, the material mimics the excitatory response of pressure-sensing neurons in the human skin. The composites, formed of silicone and graphitic nanoparticles, were prepared in several allotropic forms and functionalized with naphthalene diimide molecules. A systematic study is presented of the negative differential resistance (NDR) region of the current-voltage curves, which is[...]

Features

This thesis examines a novel class of flexible electronic material with great potential for use in the construction of stretchable amplifiers and memory elements. Most remarkably the composite material produces spontaneous oscillations that increase in frequency when pressure is applied to it. In this way, the material mimics the excitatory response of pressure-sensing neurons in the human skin. The [...]

Contents

Background Theory.- Fabrication and Measurement.- Tunneling Negative Differential Resistance in a GSC.- Electromechanical Properties and Sensing.- Electronic Amplification in the NDR Region.- Conclusions and Future Work.- Publications.- Procedure for Imprint Lithography Stamp.- ICP-RIE Recipe for Deep Silicon Etch.- Synthesis of Silane Functionalized Naphthalenediimide.- Calculation of Cut-Off Frequency.

Fields of interest

Nanoscale Science and Technology; Optical and Electronic Materials; Surfaces and Interfaces, Thin Films; Surface and Interface Science, Thin Films; Nanotechnology

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00740-3

Hardcover

2014. XV, 166 p. 92 illus., 82 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-00740-3

usually dispatched within 3 to 5 business days

M.K.G. Kruse, Lawrence Livermore National Laboratory, Livermore, USA

Extensions to the No-Core Shell Model

Importance-Truncation, Regulators and Reactions

Extensions to the No-Core Shell Model presents three extensions to the No-Core Shell Model (NCSM) that allow for calculations of heavier nuclei, specifically for the p-shell nuclei. The Importance-Truncated NCSM (IT-NCSM) formulated on arguments of multi-configurational perturbation theory selects a small set of basis states from the initially large basis space in which the Hamiltonian is diagonalized. Previous IT-NCSM calculations have proven reliable, however, there has been no thorough investigation of the inherent error in the truncated IT-NCSM calculations. This thesis provides a detailed study of IT-NCSM calculations and compares them to full NCSM calculations to judge the [...]

Features

Extensions to the No-Core Shell Model presents three extensions to the No-Core Shell Model (NCSM) that allow for calculations of heavier nuclei, specifically for the p-shell nuclei. The Importance-Truncated NCSM (IT-NCSM) formulated on arguments of multi-configurational perturbation theory selects a small set of basis states from the initially large basis space in which the Hamiltonian is [...]

Contents

Introduction to Low-Energy Nuclear Physics.- The No Core Shell Model.- Importance Truncated No Core Shell Model.- UV and IR Properties of the NCSM.- Extending the NCSM with the RGM.- Conclusion.

Fields of interest

Elementary Particles, Quantum Field Theory; Nuclear Physics, Heavy Ions, Hadrons; Quantum Field Theories, String Theory

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01392-3

Hardcover

2013. XIII, 126 p. 52 illus., 45 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-01392-3

usually dispatched within 3 to 5 business days

D.A. Vakoch (Ed.)

Extraterrestrial Altruism

Evolution and Ethics in the Cosmos

Extraterrestrial Altruism examines a basic assumption of the Search for Extraterrestrial Intelligence (SETI): that extraterrestrials will be transmitting messages to us for our benefit. This question of whether extraterrestrials will be altruistic has become increasingly important in recent years as SETI scientists have begun contemplating transmissions from Earth to make contact. Technological civilizations that transmit signals for the benefit of others, but with no immediate gain for themselves, certainly seem to be altruistic. But does this make biological sense? Should we expect altruism to evolve throughout the cosmos, or is this only wishful thinking? Is it dangerous to send [...]

Features

Extraterrestrial Altruism examines a basic assumption of the Search for Extraterrestrial Intelligence (SETI): that extraterrestrials will be transmitting messages to us for our benefit. This question of whether extraterrestrials will be altruistic has become increasingly important in recent years as SETI scientists have begun contemplating transmissions from Earth to make contact. Should we [...] ...

Contents

Cosmic Evolution, Reciprocity, and Interstellar Tit for Tat.- Extraterrestrial Intelligence: Friends, Foes, or Just Curious?.- Eliciting Altruism While Avoiding Xenophobia: A Thought Experiment.- Predator – Prey Models and Contact Considerations.- Harmful ETI Hypothesis Denied: Visiting ETIs Likely Altruists.- Altruism Toward Non-Humans: Lessons for Interstellar Communication.- Caring Capacity and Cosmocultural Evolution: Potential Mechanisms for Advanced Altruism.- The Precautionary Principle: Egoism, Altruism, and the Active SETI Debate.- The Accidental Altruist: Inferring Altruism [...]

Fields of interest

Astrobiology; Ethics; Planetology; Cross Cultural Psychology; Communication Studies

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-37749-5

Hardcover

2014. XV, 329 p. 2 illus., 1 illus. in color. (The Frontiers Collection)

\$89.99

ISBN 978-3-642-37749-5

usually dispatched within 3 to 5 business days

D.S. Stevenson

Extreme Explosions

Supernovae, Hypernovae, Magnetars, and Other Unusual Cosmic Blasts

What happens at the end of the life of massive stars? At one time we thought all these stars followed similar evolutionary paths. However, new discoveries have shown that things are not quite that simple. This book focuses on the extreme – the most intense, brilliant and peculiar – of astronomical explosions. It features highly significant observational finds that push the frontiers of astronomy and astrophysics, particularly as before these objects were only predicted in theory. This book is for those who want the latest information and ideas about the most dramatic and unusual explosions detected by current supernova searches. It examines and explains cataclysmic and unusual events [...]

Features

What happens at the end of the life of massive stars? At one time we thought all these stars followed similar evolutionary paths. However, new discoveries have shown that things are not quite that simple. This book focuses on the extreme – the most intense, brilliant and peculiar – of astronomical explosions. It features highly significant observational finds that push the frontiers of astronomy [...]

Contents

The Evolution of Massive Stars.- The Top of the Hertzsprung-Russell Diagram.- Collapsars, Hypernovae, and Long Gamma Ray Bursts.- Quiet supernovae, and Death by Fall-Back.- Luminous Blue Variables and Supernova 'Imposters'.- Death by Magnetar.- Pulsational Pair Instability and Pair Instability Supernovae.- Luminous Blue Flashes.- Population III Stars.- The Impact of Nuclear Reactions of Massive Stars on the Present Day Universe.- Red Novae and the Enigma of V838 Monocerotis.

Fields of interest

Astronomy, Astrophysics and Cosmology; Popular Science in Astronomy; Particle and Nuclear Physics

Target groups

Popular/general

Type of publication

Popular science

More on www.springer.com/978-1-4614-8135-5

Softcover

2014. XIII, 369 p. 75 illus., 61 illus. in color. (Astronomers' Universe)

\$39.99

ISBN 978-1-4614-8135-5

usually dispatched within 3 to 5 business days

E.R. Crandall, Auburn University, Auburn, USA

Factors Governing Tin Whisker Growth

Tin (Sn) whiskers are electrically conductive, single crystal eruptions that grow from Sn film surfaces. Their high aspect ratio presents reliability problems for the electronics industry due to bridging and metal arcing, leading to malfunctions and catastrophic failures in many electronic systems (including satellite and defense sectors). Due to legislation in the EU, Japan, and the U.S., mandating a gradual shift from lead (Pb)-based to lead-free solders and board finishes, there has been a reemergence of Sn whiskers. Continuing reports of Sn whisker induced failures coupled with the lack of an industry-accepted understanding of whisker growth and/or test methods to identify whisker[...]

Features

Tin (Sn) whiskers are electrically conductive, single crystal eruptions that grow from Sn film surfaces. Their high aspect ratio presents reliability problems for the electronics industry due to bridging and metal arcing, leading to malfunctions and catastrophic failures in many electronic systems (including satellite and defense sectors). Due to legislation in the EU, Japan, and the U.S., mandating a [...]

Contents

Whiskers and Their Role in Component Reliability.- Film/Substrate Effects on Whisker Growth.- Environmental Effects of Whisker Growth.- Whisker Mitigation and Prevention.- Conclusions.

Fields of interest

Electronic Circuits and Devices; Circuits and Systems; Metallic Materials; Surfaces and Interfaces, Thin Films; Surface and Interface Science, Thin Films

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00469-3

Hardcover

2013. XII, 136 p. 92 illus., 65 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-00469-3

usually dispatched within 3 to 5 business days

D. Richter, Technical University of Munich, Munich, Germany

Flash Memories

Economic Principles of Performance, Cost and Reliability Optimization

The subject of this book is to introduce a model-based quantitative performance indicator methodology applicable for performance, cost and reliability optimization of non-volatile memories. The complex example of flash memories is used to introduce and apply the methodology. It has been developed by the author based on an industrial 2-bit to 4-bit per cell flash development project. For the first time, design and cost aspects of 3D integration of flash memory are treated in this book. Cell, array, performance and reliability effects of flash memories are introduced and analyzed. Key performance parameters are derived to handle the flash complexity. A performance and array memory model[...]

Features

The subject of this book is to introduce a model-based quantitative performance indicator methodology applicable for performance, cost and reliability optimization of non-volatile memories. The complex example of flash memories is used to introduce and apply the methodology. It has been developed by the author based on an industrial 2-bit to 4-bit per cell flash development project. For the first time, [...]

Contents

1 Introduction.- 2 Fundamentals of Non-Volatile Memories.- 3 Performance Figures of Non-Volatile Memories.- 4 Fundamentals of Reliability for Flash Memories.- 5 Memory based System Development and Optimization.- 6 Memory Optimization - Key Performance Indicator Methodology.- 7 System Optimization based on Performance Indicator Models.- 8 Conclusion and Outlook.- 9 References.- Recent Publications by the Author.

Fields of interest

Electronic Circuits and Devices; Circuits and Systems; Solid State Physics; Semiconductors

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-6081-3

Hardcover

2014. XXIV, 268 p. 185 illus. (Springer Series in Advanced Microelectronics, Vol. 40)

\$139.00

ISBN 978-94-007-6081-3

usually dispatched within 3 to 5 business days

Physics

R. Haasteren, Max Planck Ins. f. Gravitational Physics, Hannover, Germany

Gravitational Wave Detection and Data Analysis for Pulsar Timing Arrays

Pulsar timing is a promising method for detecting gravitational waves in the nano-Hertz band. In his prize winning Ph.D. thesis Rutger van Haasteren deals with how one takes thousands of seemingly random timing residuals which are measured by pulsar observers, and extracts information about the presence and character of the gravitational waves in the nano-Hertz band that are washing over our Galaxy. The author presents a sophisticated mathematical algorithm that deals with this issue. His algorithm is probably the most well-developed of those that are currently in use in the Pulsar Timing Array community. In chapter 3, the gravitational-wave memory effect is described. This is one of [...]

Features

Pulsar timing is a promising method for detecting gravitational waves in the nano-Hertz band. In his prize winning Ph.D. thesis Rutger van Haasteren deals with how one takes thousands of seemingly random timing residuals which are measured by pulsar observers, and extracts information about the presence and character of the gravitational waves in the nano-Hertz band that are washing over our Galaxy. [...]

Contents

Foreword.- Introduction.- Bayesian data analysis of Pulsar Timing Arrays.- Gravitational-wave memory and Pulsar Timing Arrays.- Limiting the gravitational-wave background with EPTA data.- Marginal likelihood calculation with MCMC methods.- Index.

Fields of interest

Astronomy, Observations and Techniques; Statistics and Computing / Statistics Programs; Classical and Quantum Gravitation, Relativity Theory; Mathematical Applications in Computer Science; Astrophysics and Astroparticles

Target groups

Research

Type of publication

Ph.D. thesis

More on www.springer.com/978-3-642-39598-7

Hardcover

2014. XI, 139 p. 40 illus. (Springer Theses)

\$129.00

ISBN 978-3-642-39598-7

usually dispatched within 3 to 5 business days

J.M. Torres-Rincon

Hadronic Transport Coefficients from Effective Field Theories

This dissertation focuses on the calculation of transport coefficients in the matter created in a relativistic heavy-ion collision after chemical freeze-out. This matter can be well approximated using a pion gas out of equilibrium. We describe the theoretical framework needed to obtain the shear and bulk viscosities, the thermal and electrical conductivities and the flavor diffusion coefficients of a meson gas at low temperatures. To describe the interactions of the degrees of freedom, we use effective field theories with chiral and heavy quark symmetries. We subsequently introduce the unitarization methods in order to obtain a scattering amplitude that satisfies the unitarity [...]

Features

This dissertation focuses on the calculation of transport coefficients in the matter created in a relativistic heavy-ion collision after chemical freeze-out. This matter can be well approximated using a pion gas out of equilibrium. We describe the theoretical framework needed to obtain the shear and bulk viscosities, the thermal and electrical conductivities and the flavor diffusion coefficients of a meson gas [...]

Contents

Relativistic Heavy Ion Collisions.- Boltzmann-Uehling-Uhlenbeck Equation.- Shear Viscosity and KSS Coefficient.- Bulk Viscosity.- Thermal and Electrical Conductivities.- Bhatnagar-Gross-Krook or Relaxation Time Approximation.- Strangeness Diffusion.- Charm Diffusion.- Linear Sigma Model and Phase Transitions.- Measurement of the Bulk Viscosity.

Fields of interest

Nuclear Physics, Heavy Ions, Hadrons; Thermodynamics; Theoretical, Mathematical and Computational Physics; Low Temperature Physics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00424-2

Hardcover

2014. XIX, 215 p. 68 illus., 20 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-00424-2

usually dispatched within 3 to 5 business days

M. Stocker

Hear Where We Are

Sound, Ecology, and Sense of Place

Throughout history, hearing and sound perception have been typically framed in the context of how sound conveys information and how that information influences the listener. "Hear Where We Are" inverts this premise and examines how humans and other hearing animals use sound to establish acoustical relationships with their surroundings. This simple inversion reveals a panoply of possibilities by which we can re-evaluate how hearing animals use, produce, and perceive sound. Nuance in vocalizations become signals of enticement or boundary setting; silence becomes a field ripe in auditory possibilities; predator/prey relationships are infused with acoustic deception, and sounds that have [...]

Features

Throughout history, hearing and sound perception have been typically framed in the context of how sound conveys information and how that information influences the listener. Hear Where We Are inverts this premise and examines how humans and other hearing animals use sound to establish acoustical relationships with their surroundings. This simple inversion reveals a panoply of possibilities by [...]

Contents

Hear Here – the impact of sound on personal placement.- The Song of Creation.- What is this thing called "sound"?.- Sound Menagerie – other animals' sound perception.- Communication – Sound into Form.

Fields of interest

Acoustics; Popular Science in Nature and Environment; Behavioural Sciences; Oceanography; Community & Population Ecology

Target groups

Popular/general

Type of publication

Popular science

More on www.springer.com/978-1-4614-7284-1

Softcover

2013. XVI, 200 p. 31 illus., 12 illus. in color.

\$34.99

ISBN 978-1-4614-7284-1

usually dispatched within 3 to 5 business days

N. Yoshimura, JEOL Ltd., Tokyo, Japan

Historical Evolution Toward Achieving Ultrahigh Vacuum in JEOL Electron Microscopes

This book describes the developmental history of the vacuum system of the transmission electron microscope (TEM) at the Japan Electron Optics Laboratory (JEOL) from its inception to its use in today's high-technology microscopes. The author and his colleagues were engaged in developing vacuum technology for electron microscopes (JEM series) at JEOL for many years. This volume presents a summary and explanation of their work and the technology that makes possible a clean ultrahigh vacuum. The typical users of the TEM are top-level researchers working at the frontiers of new materials or with new biological specimens. They often use the TEM under extremely severe conditions, with[...]

Features

This book describes the developmental history of the vacuum system of the transmission electron microscope (TEM) at the Japan Electron Optics Laboratory (JEOL) from its inception to its use in today's high-technology microscopes. The author and his colleagues were engaged in developing vacuum technology for electron microscopes (JEM series) at JEOL for many years. This volume presents a summary and [...]

Contents

Introduction of the electron microscope.- History of JEOL electron microscopes.- Accidents and information, instructing us to improve the vacuum systems of JEMs.- Development of the evacuation systems for JEMs.- Development of JEOL SIPs.- Ultrahigh vacuum electron microscopes.

Fields of interest

Spectroscopy and Microscopy; Nanotechnology and Microengineering; Machinery and Machine Elements; Measurement Science, Instrumentation

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-4-431-54447-0

Softcover

2014. XI, 125 p. 86 illus., 3 illus. in color. (SpringerBriefs in Applied Sciences and Technology)

\$54.99

ISBN 978-4-431-54447-0

usually dispatched within 3 to 5 business days

T. Zhang, Dalian Institute of Chemical Physics, Dalian, China (P.R.); D.-S. Xue, Lanzhou University, Lanzhou, China (P.R.); J. Wang, Dalian Institute of Chemical Physics, Dalian, China (P.R.) (Eds.)

ISIAME 2012

Proceedings of the International Symposium on the Industrial Applications of the Mössbauer Effect (ISIAME 2012) held in Dalian, PR China, 2-7 Sept 2012

This book provides an excellent overview on the most recent results on the industrial applications of Mössbauer spectroscopy attained on the fields of nanotechnology, metallurgy, biotechnology and pharmaceutical industry, applied mineralogy, energy production industry (coal, oil, nuclear, solar, etc.), computer industry, space technology, electronic and magnetic devices technology, ion implantation technology, including topics like characterization of novel construction materials, electronic components and magnetic materials, composite materials, colloids, amorphous and nanophase materials, small particles, coatings, interfaces, thin films and multilayers, catalysis, corrosion,[...]

Features

This volume provides an excellent overview of the most recent industrial applications of Mössbauer spectroscopy in the areas of catalysis, energy, environment, biology & biomedicine, mineralogy, corrosion, electrochemistry, batteries, sensors, nanotechnology, surface modification, magnetic materials, superconductive materials, metals & alloys, new glass & amorphous materials and rare earth [...]

Contents

From the contents: 2D iron(II) spin crossover complex with 3,5-lutidine.- Spin state tuning in FeII 1D coordination polymers made of 1,2,4-triazol-4-ylpropanoic and butanoic acids.- Application of Mössbauer spectroscopy on corrosion products of NPP Industrial applications of Mössbauer Spectroscopy.- Mössbauer studies of interactions between titanium atoms dissolved in iron Defect-fluorite oxides: Ln (Eu and Gd) Mössbauer study coupled with new defect-crystal-chemistry model.- Water cleaning ability and local structure of iron-containing soda-lime silicate glass.- Electrical[...]

Fields of interest

Spectroscopy and Microscopy; Characterization and Evaluation of Materials; Physical Chemistry; Applied and Technical Physics; Industrial Chemistry / Chemical Engineering

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-94-007-6490-3

Hardcover

Previously published in the journal Hyperfine Interactions, vol. 217:1-3, 218:1-3, and 219:1-3.

2013. XVII, 475 p.

\$349.00

ISBN 978-94-007-6490-3

usually dispatched within 3 to 5 business days

L. Grill, Fritz-Haber-Institute, Berlin, Germany; C. Joachim, CNRS, Toulouse Cedex, France (Eds.)

Imaging and Manipulating Molecular Orbitals

Proceedings of the 3rd AtMol International Workshop, Berlin 24-25 September 2012

Imaging and Manipulating Molecular Orbitals celebrates the 60th anniversary of the first image of a single molecule by E. Müller. This book summarizes the advances in the field from various groups around the world who use a broad range of experimental techniques: scanning probe microscopy (STM and AFM), field emission microscopy, transmission electron microscopy, attosecond tomography and photoemission spectroscopy. The book is aimed at those who are interested in the field of molecular orbital imaging and manipulation. Included in the book are a variety of experimental techniques in combination with theoretical approaches which describe the spatial distribution and energies of the[...]

Features

Imaging and Manipulating Molecular Orbitals celebrates the 60th anniversary of the first image of a single molecule by E. Müller. This book summarizes the advances in the field from various groups around the world who use a broad range of experimental techniques: scanning probe microscopy (STM and AFM), field emission microscopy, transmission electron microscopy, attosecond tomography and photoemission [...]

Contents

Observations of individual Cu-Phthalocyanine molecules deposited on nano-tips in the field emission microscope.- High voltage STM imaging of single Copper.- Motional Analysis of A Single Organic Molecule Using Nano Carbon Materials: Scope of Atomic Level Imaging and Spectroscopy.- Imaging orbitals by ionization or electron attachment: the role of Dyson orbitals.- Mapping the electronic resonances of single molecule STM tunnel junction.- Manipulation and spectroscopy of individual phthalocyanine molecules on InAs(111)A with a low-temperature scanning tunneling microscope.- Electronic[...]

Fields of interest

Surface and Interface Science, Thin Films; Physical Chemistry; Nanotechnology; Single Molecule Studies, Molecular Motors

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-642-38808-8

Hardcover

2013. VIII, 206 p. 97 illus., 84 illus. in color. (Advances in Atom and Single Molecule Machines)

\$199.00

ISBN 978-3-642-38808-8

usually dispatched within 3 to 5 business days

G.E. Romero, Instituto Argentino de Radioastronomía, Villa Elisa, Argentina; G.S. Vila

Introduction to Black Hole Astrophysics

This book is based on the lecture notes of a one-semester course on black hole astrophysics given by the author and is aimed at advanced undergraduate and graduate students with an interest in astrophysics. The material included goes beyond that found in classic textbooks and presents details on astrophysical manifestations of black holes. In particular, jet physics and detailed accounts of objects like microquasars, active galactic nuclei, gamma-ray bursts, and ultra-luminous X-ray sources are covered, as well as advanced topics like black holes in alternative theories of gravity. The author avoids unnecessary technicalities and to some degree the book is self-contained. The reader[...]

Features

This book is based on the lecture notes of a one-semester course on black hole astrophysics given by the author and is aimed at advanced undergraduate and graduate students with an interest in astrophysics. The material included goes beyond that found in classic textbooks and presents details on astrophysical manifestations of black holes. In particular, jet physics and detailed accounts of objects [...]

Contents

Space-time and Gravitation.- Black Holes.- Black Hole Physics.- Accretion onto Black Holes.- Jets.- Evidence for Black Holes.- Wormholes and Exotic Objects.- Black Holes and Cosmology.- Topology and Manifolds.- Selected and Annotated Bibliography.

Fields of interest

Astrophysics and Astroparticles; Classical and Quantum Gravitation, Relativity Theory

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-39595-6

Softcover

2014. XVIII, 318 p. 96 illus., 47 illus. in color. (Lecture Notes in Physics, Vol. 876)

\$89.99

ISBN 978-3-642-39595-6

usually dispatched within 3 to 5 business days

A. Grozin

Introduction to Mathematica® for Physicists

The basics of computer algebra and the language of Mathematica are described. This title will lead toward an understanding of Mathematica that allows the reader to solve problems in physics, mathematics, and chemistry. Mathematica is the most widely used system for doing mathematical calculations by computer, including symbolic and numeric calculations and graphics. It is used in physics and other branches of science, in mathematics, education and many other areas. Many important results in physics would never be obtained without a wide use of computer algebra.

Features

Mathematica is the most widely used system for doing mathematical calculations by computer, including symbolic and numeric calculations and graphics. It is used in physics and other branches of science, in mathematics, education and many other areas. Many important results in physics would never be obtained without a wide use of computer algebra. This book describes ideas of computer algebra and the [...]

Contents

Part I Lectures.- Computer algebra systems.- Overview of Mathematica.- Expressions.- Patterns and substitutions.- Functions.- Mathematica as a programming language.- Gröbner bases.- Calculus.- Risch algorithm.- Linear algebra.- Input-output and strings.- Packages.- Part II Computer classes.- Plots.- Trigonometric functions.- Quantum oscillator.- Spherical harmonics.- Adding angular momenta in quantum mechanics.- Classical nonlinear oscillator.- Cyclohexane.- Multi- ζ functions.- Quantum nonlinear oscillator.- Riemann curvature tensor.- Rainbow.- Problems for students.

Fields of interest

Numerical and Computational Physics; Computer Applications in Chemistry; Particle and Nuclear Physics; Mathematical Applications in the Physical Sciences

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-3-319-00893-6

Hardcover

2014. X, 219 p. 84 illus., 18 illus. in color. (Graduate Texts in Physics)

\$69.99

ISBN 978-3-319-00893-6

usually dispatched within 3 to 5 business days

K. Kulikov, St. Petersburg Polytechnical State Univ, St. Petersburg, Russian Federation

Laser Interaction with Biological Material

Mathematical Modeling

This book covers the principles of laser interaction with biological cells and tissues of varying degrees of organization. The problems of biomedical diagnostics are considered. Scattering of laser irradiation of blood cells is modeled for biological structures (dermis, epidermis, vascular plexus). An analytic theory is provided which is based on solving the wave equation for the electromagnetic field. It allows the accurate analysis of interference effects arising from the partial superposition of scattered waves. Treated topics of mathematical modeling are: optical characterization of biological tissue with large-scale and small-scale inhomogeneities in the layers, heating blood[...]

Features

This book covers the principles of laser interaction with biological cells and tissues of varying degrees of organization. The problems of biomedical diagnostics are considered. Scattering of laser irradiation of blood cells is modeled for biological structures (dermis, epidermis, vascular plexus). An analytic theory is provided which is based on solving the wave equation for the electromagnetic field. It [...]

Contents

From the Contents: The main physical processes occurring during the interaction of optical radiation with matter.- The methods for describing the interaction of laser radiation with biological tissues and objects.- Present situation of studies in biological objects by means of mathematical models describing the interaction of biological tissue with laser light.- The mathematical modeling of electrical characteristics of spherical particles, simulating blood cells by the method of intracavity laser spectroscopy.

Fields of interest

Biophysics and Biological Physics; Laser Technology and Physics, Photonics; Biomedical Engineering; Medical and Radiation Physics; Numerical and Computational Physics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01738-9

Hardcover

2014. XI, 149 p. 30 illus., 14 illus. in color. (Biological and Medical Physics, Biomedical Engineering)

\$129.00

ISBN 978-3-319-01738-9

usually dispatched within 3 to 5 business days

R. Gendler (Ed.)

N.A. Wasley

P. Gandini, University of Oxford, Oxford, United Kingdom

Lessons from the Masters

Current Concepts in Astronomical Image Processing

There are currently thousands of amateur astronomers around the world engaged in astrophotography at a sophisticated level. Their ranks far outnumber professional astronomers doing the same and their contributions both technically and artistically are the dominant drivers of progress in the field today. This book is a unique collaboration of individuals world-renowned in their particular area and covers in detail each of the major sub-disciplines of astrophotography. This approach offers the reader the greatest opportunity to learn the most current information and the latest techniques directly from the foremost innovators in the field today. "Lessons from the Masters" includes a[...]

Features

There are currently thousands of amateur astronomers around the world engaged in astrophotography at increasingly sophisticated levels. Their ranks far outnumber professional astronomers doing the same and their contributions both technically and artistically are the dominant drivers of progress in the field today. This book is a unique collaboration of individuals, all world-renowned in their particular [...]

Contents

Theory of Astronomical Imaging.- Bringing Out Small Scale Structure.- Color Amplification.- Wide-field Constellation Imaging and Bringing Out Faint Large Scale Structure.- Narrowband Imaging.- Wide-field Imaging – Strategies for Processing Light Contaminated Data.- High Resolution Planetary and Lunar Imaging.- Deep-Sky Imaging –Workflow 1.- Deep-Sky Imaging – Workflow 2.- Nightscape Imaging.- Deep-Sky Imaging – Workflow 3.- Eclipse Imaging and Processing of the Solar Corona.- Solar Imaging.- Aesthetics and Composition in Deep Sky Imaging.- High Dynamic Range Processing.- Cosmetics:[...]

Fields of interest

Astronomy, Observations and Techniques; Popular Science in Astronomy; Image Processing and Computer Vision; Photography

Target groups

Popular/general

Type of publication

Popular science

More on www.springer.com/978-1-4614-7833-1

Softcover

2013. XII, 387 p. 265 illus., 237 illus. in color. (The Patrick Moore Practical Astronomy Series, Vol. 179)

\$44.99

ISBN 978-1-4614-7833-1

usually dispatched within 3 to 5 business days

Nano-photonics in III-V Semiconductors for Integrated Quantum Optical Circuits

This thesis breaks new ground in the physics of photonic circuits for quantum optical applications. The photonic circuits are based either on ridge waveguides or photonic crystals, with embedded quantum dots providing the single qubit, quantum optical emitters. The highlight of the thesis is the first demonstration of a spin-photon interface using an all-waveguide geometry, a vital component of a quantum optical circuit, based on deterministic single photon emission from a single quantum dot. The work makes a further important contribution to the field by demonstrating the effects and limitations that inevitable disorder places on photon propagation in photonic crystal waveguides, a[...]

Features

This thesis breaks new ground in the physics of photonic circuits for quantum optical applications. The photonic circuits are based either on ridge waveguides or photonic crystals, with embedded quantum dots providing the single qubit, quantum optical emitters. The highlight of the thesis is the first demonstration of a spin-photon interface using an all-waveguide geometry, a vital component of a quantum [...]

Contents

Introduction.- Experimental methods.- Disorder limited photon propagation and Anderson localisation in photonic crystal waveguides.- On-chip interface for in-plane polarisation transfer for quantum information processing.- Direct in-plane readout of QD spin.- InP QDs in GaInP photonic crystal cavities.- Development of additional technological approaches.- Conclusions and future directions.

Fields of interest

Semiconductors; Quantum Optics, Quantum Electronics, Nonlinear Optics; Quantum Information Technology, Spintronics; Applied Optics, Optoelectronics, Optical Devices; Laser Technology and Physics, Photonics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01513-2

Hardcover

2014. XV, 129 p. 77 illus., 51 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-01513-2

usually dispatched within 3 to 5 business days

Observation of CP Violation in $B_{\pm}^{\pm} DK_{\pm}^{\pm}$ Decays

CP violation is a well-established phenomenon in particle physics, but until 2001 it was only observed in kaons. In the last decade, several matter-antimatter asymmetries have been observed in neutral B mesons in line with the expectations of the Standard Model of the weak interaction. Direct CP violation is also expected in the decay rates of charged B+ mesons versus that of B- mesons, though the greatest effects are present in a decay that occurs just twice in 10 million decays. Such rarity requires huge samples to study and this is exactly what the LHC, and its dedicated B-physics experiment LHCb provide. This thesis presents an analysis of the first two years of LHCb data. The[...]

Features

CP violation is a well-established phenomenon in particle physics, but until 2001 it was only observed in kaons. In the last decade, several matter-antimatter asymmetries have been observed in neutral B mesons in line with the expectations of the Standard Model of the weak interaction. Direct CP violation is also expected in the decay rates of charged B+ mesons versus that of B- [...]

Contents

Introduction.- CP violation in the SM and the CKM angle γ .- The LHCb experiment at the LHC.- Reconstruction and selection.- Background studies.- The simultaneous fit.- Results.- Conclusions.- Distributions of the BDT input variables.- Validation of the ApT variable.- Histograms of systematic errors.- Bibliography.

Fields of interest

Elementary Particles, Quantum Field Theory; Quantum Field Theories, String Theory

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01028-1

Hardcover

2014. XIX, 167 p. 127 illus., 115 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-01028-1

usually dispatched within 3 to 5 business days

S. Suga, Osaka University, Osaka, Japan; A. Sekiyama, Osaka University, Osaka, Japan

Photoelectron Spectroscopy

Bulk and Surface Electronic Structures

Photoelectron spectroscopy is now becoming more and more required to investigate electronic structures of various solid materials in the bulk, on surfaces as well as at buried interfaces. The energy resolution was much improved in the last decade down to 1 meV in the low photon energy region. Now this technique is available from a few eV up to 10 keV by use of lasers, electron cyclotron resonance lamps in addition to synchrotron radiation and X-ray tubes. High resolution angle resolved photoelectron spectroscopy (ARPES) is now widely applied to band mapping of materials. It attracts a wide attention from both fundamental science and material engineering. Studies of the dynamics of[...]

Features

Photoelectron spectroscopy is now becoming more and more required to investigate electronic structures of various solid materials in the bulk, on surfaces as well as at buried interfaces. The energy resolution was much improved in the last decade down to 1 meV in the low photon energy region. Now this technique is available from a few eV up to 10 keV by use of lasers, electron cyclotron resonance lamps in [...]

Contents

Theoretical Background.- Instrumentation and Methodology.- Bulk and Surface Sensitivity of Photoelectron Spectroscopy.- Examples of Angle Integrated Photoelectron Spectroscopy.- Angle-Resolved Photoelectron Spectroscopy in HV-regions.- High Resolution Soft X-ray Angle-Integrated and -Resolved Photoelectron Spectroscopy of Correlated Electron Systems.- Very Low Photon Energy Photoelectron Spectroscopy.- Inverse Photoemission.- Photoelectron Diffraction.- Complementary Techniques for Studying Bulk Electronic Structures.- Surface Spectroscopy by Scanning Tunneling Microscope.

Fields of interest

Applied Optics, Optoelectronics, Optical Devices; Classical Electrodynamics, Wave Phenomena; Surface and Interface Science, Thin Films; Quantum Optics, Quantum Electronics, Nonlinear Optics; Physical Chemistry; Characterization and Evaluation of Materials

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-37529-3

Hardcover

2014. XVIII, 378 p. 192 illus., 70 illus. in color. (Springer Series in Optical Sciences, Vol. 176)

\$179.00

ISBN 978-3-642-37529-3

usually dispatched within 3 to 5 business days

K. Manouchehri, J. Wang

Physical Implementation of Quantum Walks

Given the extensive application of random walks in virtually every science related discipline, we may be at the threshold of yet another problem solving paradigm with the advent of quantum walks. Over the past decade, quantum walks have been explored for their non-intuitive dynamics, which may hold the key to radically new quantum algorithms. This growing interest has been paralleled by a flurry of research into how one can implement quantum walks in laboratories. This book presents numerous proposals as well as actual experiments for such a physical realization, underpinned by a wide range of quantum, classical and hybrid technologies.

Features

Given the extensive application of random walks in virtually every science related discipline, we may be at the threshold of yet another problem solving paradigm with the advent of quantum walks. Over the past decade, quantum walks have been explored for their non-intuitive dynamics, which may hold the key to radically new quantum algorithms. This growing interest has been paralleled by a flurry of research [...]

Contents

Introduction.- Theory.- Physical Implementation.- Electromagnetic Radiation.- Atom Optics.- Bloch Rotations.- Linear Optical Elements.- Optical Lattices.

Fields of interest

Quantum Information Technology, Spintronics; Quantum Physics; Quantum Computing

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-36013-8

Hardcover

2014. X, 230 p. 100 illus., 34 illus. in color. (Quantum Science and Technology)

\$129.00

ISBN 978-3-642-36013-8

usually dispatched within 3 to 5 business days

Y. Fu, Royal Institute of Technology, Stockholm, Sweden

Physical Models of Semiconductor Quantum Devices

The science and technology relating to nanostructures continues to receive significant attention for its applications to various fields including microelectronics, nanophotonics, and biotechnology. This book describes the basic quantum mechanical principles underlining this fast developing field. From the fundamental principles of quantum mechanics to nanomaterial properties, from device physics to research and development of new systems, this title is aimed at undergraduates, graduates, postgraduates, and researchers.

Features

The science and technology relating to nanostructures continues to receive significant attention for its applications to various fields including microelectronics, nanophotonics, and biotechnology. This book describes the basic quantum mechanical principles underlining this fast developing field. From the fundamental principles of quantum mechanics to nanomaterial properties, from device physics to [...]

Contents

Semiconductor materials.- Electronic processes in semiconductors.- Optical properties of semiconductors.- Nano-size electronic devices.- Quantum optoelectronics.- Plasmonics.- Numerical recipes.

Fields of interest

Nanoscale Science and Technology; Optical and Electronic Materials; Theoretical and Computational Chemistry

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-7173-4

Hardcover

2014. XI, 408 p. 148 illus., 57 illus. in color.

\$179.00

ISBN 978-94-007-7173-4

usually dispatched within 3 to 5 business days

V.M. Fomin, Leibniz Institute for Solid State and Ma, Dresden, Germany (Ed.)

Physics of Quantum Rings

This book deals with a new class of materials, quantum rings. Innovative recent advances in experimental and theoretical physics of quantum rings are based on the most advanced state-of-the-art fabrication and characterization techniques as well as theoretical methods. The experimental efforts allow to obtain a new class of semiconductor quantum rings formed by capping self-organized quantum dots grown by molecular beam epitaxy. Novel optical and magnetic properties of quantum rings are associated with non-trivial topologies at the nanoscale. An adequate characterization of quantum rings is possible on the basis of modern characterization methods of nanostructures, such as Scanning[...]

Features

This book deals with a new class of materials, quantum rings. Innovative recent advances in experimental and theoretical physics of quantum rings are based on the most advanced state-of-the-art fabrication and characterization techniques as well as theoretical methods. The experimental efforts allow to obtain a new class of semiconductor quantum rings formed by capping self-organized quantum dots grown by [...]

Contents

Preface.- Quantum Ring: A Unique Playground for the Quantum-Mechanical Paradigm.- Fabrication, Characterization and Physical Properties.- Growth and Spectroscopy of Semiconductor Quantum Rings.- Quantum Rings: Fabrication and Optical Properties.- Self-organized Quantum Rings: Physical Characterization and Theoretical Modeling.- Scanning-probe Electronic Imaging of Lithographically Patterned Quantum Rings.- Self-organized Formation and XSTM-Characterization of GaSb/GaAs Quantum Rings.- Self-assembled Semiconductor Quantum Rings Complexes by Droplet Epitaxy: Growth and Physical[...]

Fields of interest

Nanoscale Science and Technology; Quantum Information Technology, Spintronics; Optical and Electronic Materials; Magnetism, Magnetic Materials; Nanotechnology and Microengineering; Spectroscopy and Microscopy

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-39196-5

Hardcover

2014. XXIV, 487 p. 257 illus., 93 illus. in color. (NanoScience and Technology)

\$179.00

ISBN 978-3-642-39196-5

usually dispatched within 3 to 5 business days

P. Fulda, University of Florida, Florida, USA

Precision Interferometry in a New Shape

Higher-order Laguerre-Gauss Modes for Gravitational Wave Detection

With his Ph.D. thesis, presented here in the format of a "Springer Theses", Paul Fulda won the 2012 GWIC thesis prize awarded by the Gravitational Wave International Committee. The impact of thermal noise on future gravitational wave detectors depends on the size and shape of the interrogating laser beam. It had been known since 2006 that, in theory, higher-order Laguerre-Gauss modes could reduce thermal noise. Paul Fulda's research brings Laguerre-Gauss modes an enormous step forward. His work includes analytical, numerical and experimental work on table-top setups as well as experiments at the Glasgow 10m prototype interferometer. Using numerical simulations the LG33 mode was[...]

Features

With his Ph.D. thesis, presented here in the format of a "Springer Theses", Paul Fulda won the 2012 GWIC thesis prize awarded by the Gravitational Wave International Committee. The impact of thermal noise on future gravitational wave detectors depends on the size and shape of the interrogating laser beam. It had been known since 2006 that, in theory, higher-order Laguerre-Gauss modes could reduce thermal [...]

Contents

Introduction.- Laguerre-Gauss beams for test mass thermal noise reduction.- Simulation study into LG33 mode interferometry and production.- Table-top demonstrations of LG mode production and cleaning.- Prototype experiments with the LG33 mode.- Summary and conclusions.- Bibliography.- Acknowledgments.

Fields of interest

Laser Technology and Physics, Photonics; Classical and Quantum Gravitation, Relativity Theory; Applied Optics, Optoelectronics, Optical Devices; Astrophysics and Astroparticles; Measurement Science, Instrumentation

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01374-9

Hardcover

2014. XXII, 154 p. 61 illus., 44 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-01374-9

usually dispatched within 3 to 5 business days

Th. Gilbert, Université Libre de Bruxelles, Brussels, Belgium; M. Kirkilionis, University of Warwick, Coventry, United Kingdom; G. Nicolis, Université Libre de Bruxelles, Brussels, Belgium (Eds.)

Proceedings of the European Conference on Complex Systems 2012

The European Conference on Complex Systems, held under the patronage of the Complex Systems Society, is an annual event that has become the leading European conference devoted to complexity science. ECCS'12, its ninth edition, took place in Brussels, during the first week of September 2012. It gathered about 650 scholars representing a wide range of topics relating to complex systems research, with emphasis on interdisciplinary approaches. More specifically, the following tracks were covered:1. Foundations of Complex Systems2. Complexity, Information and Computation3. Prediction, Policy and Planning, Environment4. Biological Complexity5. Interacting Populations, Collective Behavior6.[...]

Features

The European Conference on Complex Systems, held under the patronage of the Complex Systems Society, is an annual event that has become the leading European conference devoted to complexity science. ECCS'12, its ninth edition, took place in Brussels, during the first week of September 2012. It gathered about 650 scholars representing a wide range of topics relating to complex systems research, with emphasis [...]

Contents

Part I. Foundations of Complex Systems.- Part II. Complexity, Information and Computation.- Part III. Prediction, Policy and Planning, Environment.- Part IV. Biological Complexity.- Part V. Interacting Populations, Collective Behavior.- Part VI. Social Systems, Economics and Finance.- Part VII. Contributions to Satellite Meetings.- VII.a. Complexity in Spatial Dynamics.- VII.B. Space-Time Phases.- VII.C. Complex Dynamics in Cellular Systems.- VII.D. Information Processing with Recurrent Dynamical Systems: Theory and Experiment.- VII.E. Complexity in the Real World - From Policy[...]

Fields of interest

Statistical Physics, Dynamical Systems and Complexity; Complexity; Game Theory / Mathematical Methods; Systems Biology; Statistics for Social Science, Behavioral Science, Education, Public Policy, and Law

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-00394-8

Hardcover

2013. XVII, 1096 p. 316 illus., 219 illus. in color. (Springer Proceedings in Complexity)

\$229.00

ISBN 978-3-319-00394-8

usually dispatched within 3 to 5 business days

K. Yamanouchi, The University of Tokyo, Tokyo, Japan; G.G. Paulus, Friedrich Schiller University Jena, Jena, Germany; D. Mathur, Tata Institute of Fundamental Research, Mumbai, India (Eds.)

Progress in Ultrafast Intense Laser Science

Volume X

The PUILS series delivers up-to-date reviews of progress in Ultrafast Intense Laser Science, a newly emerging interdisciplinary research field spanning atomic and molecular physics, molecular science, and optical science, which has been stimulated by the recent developments in ultrafast laser technologies. Each volume compiles peer-reviewed articles authored by researchers at the forefront of each their own subfields of UILS. Every chapter opens with an overview of the topics to be discussed, so that researchers unfamiliar to the subfield, as well as graduate students, can grasp the importance and attractions of the research topic at hand; these are followed by reports of cutting-edge[...]

Features

The PUILS series delivers up-to-date reviews of progress in Ultrafast Intense Laser Science, a newly emerging interdisciplinary research field spanning atomic and molecular physics, molecular science, and optical science, which has been stimulated by the recent developments in ultrafast laser technologies. Each volume compiles peer-reviewed articles authored by researchers at the forefront of each their own [...]

Contents

Laser-Assisted Electron Scattering and Diffraction in Ultrashort Intense Laser Fields.- Electron Localization in Hydrogen.- Observation of Vibrational Wave-Packet Dynamics in D2+ using High-order Harmonic Pulses.- Frequency Tunable Attosecond Apparatus.- Strong-Field Atomic Physics in the X-Ray Regime.- Third Harmonic Generation from Perturbed Femtosecond Filaments in Air.- Strong and Coherent Forward Emissions from Molecules Driven by Femtosecond Infrared Laser Pulses.- Tests of Classical and Quantum Electrodynamics with Intense Laser Fields.- Quantum Vacuum Polarization Searches with[...]

Fields of interest

Atoms and Molecules in Strong Fields, Laser Matter Interaction; Laser Technology and Physics, Photonics; Physical Chemistry; Classical Electrodynamics, Wave Phenomena; Spectroscopy / Spectrometry

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00520-1

Hardcover

2014. XIII, 156 p. 66 illus., 39 illus. in color. (Progress in Ultrafast Intense Laser Science, Vol. 106)

\$129.00

ISBN 978-3-319-00520-1

usually dispatched within 3 to 5 business days

G. Jaeger, Boston University, Boston, USA

Quantum Objects

Non-Local Correlation, Causality and Objective Indefiniteness in the Quantum World

This monograph identifies the essential characteristics of the objects described by current quantum theory and considers their relationship to space-time. In the process, it explicates the senses in which quantum objects may be consistently considered to have parts of which they may be composed or into which they may be decomposed. The book also demonstrates the degree to which reduction is possible in quantum mechanics, showing it to be related to the objective indefiniteness of quantum properties and the strong non-local correlations that can occur between the physical quantities of quantum subsystems. Careful attention is paid to the relationships among such property correlations.[...]

Features

This monograph identifies the essential characteristics of the objects described by current quantum theory and considers their relationship to space-time. In the process, it explicates the senses in which quantum objects may be consistently considered to have parts of which they may be composed or into which they may be decomposed. The book also demonstrates the degree to which reduction is possible in [...]

Contents

Non-locality, Communication, and Entanglement.- Einstein locality.- Bell locality.- Communication.- Non-locality.- Entanglement.- Causation, Imprecision, and Indefiniteness.- Probability.- Causation.- Indeterminacy.- Imprecision.- Indefiniteness.- Individuals, Parts, and Wholes.- Potentiality.- Discernibility.- Individuation.- Persistence.- Parts and wholes.

Fields of interest

Quantum Physics; History and Philosophical Foundations of Physics; Philosophy of Science; Quantum Information Technology, Spintronics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-37628-3

Hardcover

2014. XI, 203 p. 23 illus. (Fundamental Theories of Physics, Vol. 175)

\$129.00

ISBN 978-3-642-37628-3

usually dispatched within 3 to 5 business days

D.C. Struppa, Chapman University, Orange, USA; J.M. Tollaksen, Chapman University, Orange, USA (Eds.)

Quantum Theory: A Two-Time Success Story

Yakir Aharonov Festschrift

Yakir Aharonov is one of the leading figures in the foundations of quantum physics. His contributions range from the celebrated Aharonov-Bohm effect (1959), to the more recent theory of weak measurements (whose experimental confirmations were recently ranked as the two most important results of physics in 2011). This volume will contain 27 original articles, contributed by the most important names in quantum physics, in honor of Aharonov's 80-th birthday. Sections include "Quantum mechanics and reality," with contributions from Nobel Laureates David Gross and Sir Anthony Leggett and Yakir Aharonov, S. Popescu and J. Tollaksen; "Building blocks of Nature" with contributions from [...]

Features

Yakir Aharonov is one of the leading figures in the foundations of quantum physics. His contributions range from the celebrated Aharonov-Bohm effect (1959), to the more recent theory of weak measurements (whose experimental confirmations were recently ranked as the two most important results of physics in 2011). This volume will contain 27 original articles, contributed by the most important names in [...]

Contents

A Century of Quantum Mechanics by D. Gross.- Realism and the Physical World by A.J. Leggett.- Each Instant of Time a New Universe by Y. Aharonov et al.- The Brout-Englert-Higgs Mechanism and Its Scalar Boson by F. Englert.- NET = T.O.E.? by S. Nussinov.- The Limits of Black Hole Complementarity by L. Susskind.- Quantum Weak Measurements and Cosmology by P.C.W. Davies.- The Quantum Mechanical Arrows of Time by J.B. Hartle.- Collapse Miscellany by P. Pearle.- Many Words, the Born Rule and the Self-Locating Uncertainty by S.M. Carroll et al.- Physics and Narrative by D. Albert.- Quantum[...]

Fields of interest

Quantum Physics; Quantum Field Theories, String Theory; History and Philosophical Foundations of Physics

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-88-470-5216-1

Hardcover

2014. XV, 406 p. 111 illus., 28 illus. in color.

\$259.00

ISBN 978-88-470-5216-1

usually dispatched within 3 to 5 business days

T. Howard, Southwest Research Institute, Boulder, USA

Space Weather and Coronal Mass Ejections

Space weather has attracted a lot of attention in recent times. Severe space weather can disrupt spacecraft, and on Earth can be the cause of power outages and power station failure. It also presents a radiation hazard for airline passengers and astronauts. These “magnetic storms” are most commonly caused by coronal mass ejections, or CMES, which are large eruptions of plasma and magnetic field from the Sun that can reach speeds of several thousand km/s. In this SpringerBrief, Space Weather and Coronal Mass Ejections, author Timothy Howard briefly introduces the coronal mass ejection, its scientific importance, and its relevance to space weather at Earth and other planets. This title[...]

Features

Space weather has attracted a lot of attention in recent times. Severe space weather can disrupt spacecraft, and on Earth can be the cause of power outages and power station failure. It also presents a radiation hazard for airline passengers and astronauts. These “magnetic storms” are most commonly caused by coronal mass ejections, or CMES, which are large eruptions of plasma and magnetic field from the Sun [...]

Contents

Introduction.- History.- Observation and Modeling.- Relevance to Space Weather.- Recent Developments

Fields of interest

Extraterrestrial Physics, Space Sciences; Planetology; Aerospace Technology and Astronautics

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-7974-1

Softcover

2014. XIII, 107 p. 31 illus., 18 illus. in color. (Springer-Briefs in Astronomy)

\$49.99

ISBN 978-1-4614-7974-1

usually dispatched within 3 to 5 business days

E.ourgoulhon

Special Relativity in General Frames

From Particles to Astrophysics

Special relativity is the basis of many fields in modern physics: particle physics, quantum field theory, high-energy astrophysics, etc. This theory is presented here by adopting a four-dimensional point of view from the start. An outstanding feature of the book is that it doesn't restrict itself to inertial frames but considers accelerated and rotating observers. It is thus possible to treat physical effects such as the Thomas precession or the Sagnac effect in a simple yet precise manner. In the final chapters, more advanced topics like tensorial fields in spacetime, exterior calculus and relativistic hydrodynamics are addressed. In the last, brief chapter the author gives a preview[...]

Features

Special relativity is the basis of many fields in modern physics: particle physics, quantum field theory, high-energy astrophysics, etc. This theory is presented here by adopting a four-dimensional point of view from the start. An outstanding feature of the book is that it doesn't restrict itself to inertial frames but considers accelerated and rotating observers. It is thus possible to treat physical [...]

Contents

Minkowski Spacetime.- Worldlines and Proper Time.- Observers.- Kinematics 1: Motion with Respect to an Observer.- Kinematics 2: Change of Observer.- Lorentz Group.- Lorentz Group as a Lie Group.- Inertial Observers and Poincaré Group.- Energy and Momentum.- Angular Momentum.- Principle of Least Action.- Accelerated Observers.- Rotating Observers.- Tensors and Alternate Forms.- Fields on Spacetime.- Integration in Spacetime.- Electromagnetic Field.- Maxwell Equations.- Energy-Momentum Tensor.- Energy-Momentum of the Electromagnetic Field.- Relativistic Hydrodynamics.- What about[...]

Fields of interest

Theoretical, Mathematical and Computational Physics; Astrophysics and Astroparticles; Particle Acceleration and Detection, Beam Physics; Classical and Quantum Gravitation, Relativity Theory; Fluid- and Aerodynamics; Applications of Mathematics

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-3-642-37275-9

Hardcover

Original French edition published by EDP Sciences, 2010
2013. XXX, 784 p. 178 illus., 159 illus. in color. (Graduate Texts in Physics)

\$99.00

ISBN 978-3-642-37275-9

usually dispatched within 3 to 5 business days

J. Nováková, Charles University in Prague, Prague, Czech Republic

Standard Model Measurements with the ATLAS Detector

Monte Carlo Simulations of the Tile Calorimeter and Measurement of the $Z \rightarrow \tau\tau$ Cross Section

This thesis deals with two main procedures performed with the ATLAS detector at the Large Hadron Collider (LHC). The noise description in the hadronic calorimeter TileCal represents a very valuable technical job. The second part presents a fruitful physics analysis - the cross section measurement of the process $p+p \rightarrow Z0 \rightarrow \tau + \tau$. The Monte Carlo simulations of the TileCal are described in the first part of the thesis, including a detailed treatment of the electronic noise and multiple interactions (so-called pile-up). An accurate description of both is crucial for the reconstruction of e.g. jets or hadronic tau-jets. The second part reports a Standard Model measurement of the $Z0 \rightarrow \tau + \tau$ [...]

Features

This thesis deals with two main procedures performed with the ATLAS detector at the Large Hadron Collider (LHC). The noise description in the hadronic calorimeter TileCal represents a very valuable technical job. The second part presents a fruitful physics analysis - the cross section measurement of the process $p + p \rightarrow Z0 \rightarrow \tau + \tau$. The Monte Carlo simulations of the TileCal are [...]

Contents

Overview of the ATLAS experiment at the LHC.- Monte Carlo simulations of the Tile calorimeter.- Electron efficiency measurement.- $Z0 \rightarrow \tau + \tau$ cross section measurement.

Fields of interest

Elementary Particles, Quantum Field Theory; Measurement Science, Instrumentation; Quantum Field Theories, String Theory

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00809-7

Hardcover

2014. XV, 91 p. 35 illus., 26 illus. in color. (Springer Theses)

\$99.00

ISBN 978-3-319-00809-7

usually dispatched within 3 to 5 business days

T. Stankovski, Lancaster University, Lancaster, United Kingdom

Tackling the Inverse Problem for Non-Autonomous Systems

Application to the Life Sciences

This thesis presents a new method for following evolving interactions between coupled oscillatory systems of the kind that abound in nature. Examples range from the subcellular level, to ecosystems, through climate dynamics, to the movements of planets and stars. Such systems mutually interact, adjusting their internal clocks, and may correspondingly move between synchronized and non-synchronized states. The thesis describes a way of using Bayesian inference to exploit the presence of random fluctuations, thus analyzing these processes in unprecedented detail. It first develops the basic theory of interacting oscillators whose frequencies are non-constant, and then applies it to the[...]

Features

This thesis presents a new method for following evolving interactions between coupled oscillatory systems of the kind that abound in nature. Examples range from the subcellular level, to ecosystems, through climate dynamics, to the movements of planets and stars. Such systems mutually interact, adjusting their internal clocks, and may correspondingly move between synchronized and non-synchronized states. The [...]

Contents

Theoretical background: non-autonomous systems and synchronization.- Inference of time-evolving coupled dynamical systems in the presence of noise.- Application to life sciences.- Analogue simulation and synchronization analysis of non-autonomous oscillators.

Fields of interest

Statistical Physics, Dynamical Systems and Complexity; Probability Theory and Stochastic Processes; Theoretical, Mathematical and Computational Physics; Math. Appl. in Environmental Science; Computer Applications in Life Sciences

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00752-6

Hardcover

2014. XV, 135 p. 48 illus., 26 illus. in color. (Springer The- ses)

\$129.00

ISBN 978-3-319-00752-6

usually dispatched within 3 to 5 business days

N. Kanas, University of California, San Francisco, USA

The New Martians

A Scientific Novel

The year is 2035, and the crew from the first expedition to Mars is returning to Earth. The crewmembers are anxious to get home, and ennui pervades the ship. The mood is broken by a series of mysterious events that jeopardize their safety. Someone or something is threatening the crew. Is it an alien being? A psychotic crewmember? A malfunctioning computer? The truth raises questions about the crewmembers' fate and that of the human race. In this novel, the intent is to show real psychological issues that could affect a crew returning from a long-duration mission to Mars. The storyline presents a mystery that keeps the reader guessing, yet the issues at stake are based on the[...]

Features

The year is 2035, and the crew from the first expedition to Mars is returning to Earth. The crewmembers are anxious to get home, and ennui pervades the ship. The mood is broken by a series of mysterious events that jeopardize their safety. Someone or something is threatening the crew. Is it an alien being? A psychotic crewmember? A malfunctioning computer? The truth raises questions about the crewmembers' [...]

Contents

Part I: The Novel.- The New Martians.- Part II: The Science Behind the Fiction.- Psychological Issues During an Expedition to Mars.- References.

Fields of interest

Extraterrestrial Physics, Space Sciences; Popular Science in Astronomy; Psychology Research; Psychiatry; Popular Science in Psychology

Target groups

Popular/general

Type of publication

Popular science

More on www.springer.com/978-3-319-00974-2

Softcover

2014. VIII, 123 p. 2 illus. in color. (Science and Fiction)

\$19.99

ISBN 978-3-319-00974-2

usually dispatched within 3 to 5 business days

A. Benediktovitch, Belarusian State University, Minsk, Belarus; I. Feranchuk, Belarusian State University, Minsk, Belarus; A. Ulyan- kov

Theoretical Concepts of X-Ray Nanoscale Analysis

Theory and Applications

This book provides a concise survey of modern theoretical concepts of X-ray materials analysis. The principle features of the book are: basics of X-ray scattering, interaction between X-rays and matter and new theoretical concepts of X-ray scattering. The various X-ray techniques are considered in detail: high-resolution X-ray diffraction, X-ray reflectivity, grazing-incidence small-angle X-ray scattering and X-ray residual stress analysis. All the theoretical methods presented use the unified physical approach. This makes the book especially useful for readers learning and performing data analysis with different techniques. The theory is applicable to studies of bulk materials of all[...]

Features

This book provides a concise survey of modern theoretical concepts of X-ray materials analysis. The principle features of the book are: basics of X-ray scattering, interaction between X-rays and matter and new theoretical concepts of X-ray scattering. The various X-ray techniques are considered in detail: high-resolution X-ray diffraction, X-ray reflectivity, grazing-incidence small-angle X-ray scattering and [...]

Contents

Basic principles of the interaction between X-rays and matter.- X-ray reflectivity.- High-resolution X-ray diffraction.- Grazing-incidence small-angle X-ray scattering.- Theory of X-ray scattering from imperfect crystals.- X-ray diffraction for evaluation of residual stresses in polycrystals.- Methods of mathematical and physical optimization of X-ray data analysis.

Fields of interest

Measurement Science, Instrumentation; Characterization and Evaluation of Materials; Theoretical, Mathematical and Computational Physics; Applied and Technical Physics; Spectroscopy and Microscopy

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-642-38176-8

Hardcover

2014. XIII, 318 p. 108 illus., 37 illus. in color. (Springer Series in Materials Science, Vol. 183)

\$179.00

ISBN 978-3-642-38176-8

usually dispatched within 3 to 5 business days

C. Jin, Kansas State University, Manhattan, USA

S. Thutupalli

O. Pronin

Theory of Nonlinear Propagation of High Harmonics Generated in a Gaseous Medium

Theory of Nonlinear Propagation of High Harmonics Generated in a Gaseous Medium establishes the theoretical tools to study High-Order Harmonic Generation (HHG) by intense ultrafast infrared lasers in atoms and molecules. The macroscopic propagation of both laser and high-harmonic fields is taken into account by solving Maxwell's wave equations, while the single-atom or single-molecule response is treated with a quantitative rescattering theory by solving the time-dependent Schrödinger equation. This book demonstrates for the first time that observed experimental HHG spectra of atoms and molecules can be accurately reproduced theoretically when precise experimental conditions are known. [...]

Features

Theory of Nonlinear Propagation of High Harmonics Generated in a Gaseous Medium establishes the theoretical tools to study High-Order Harmonic Generation (HHG) by intense ultrafast infrared lasers in atoms and molecules. The macroscopic propagation of both laser and high-harmonic fields is taken into account by solving Maxwell's wave equations, while the single-atom or single-molecule response is [...]

Contents

Introduction to High-Order Harmonic Generation.- Theoretical Tools.- Medium Propagation Effects in High-Order Harmonic Generation of Ar.- Comparison of High-Order Harmonic Generation of Ar Using a Truncated Bessel or a Gaussian Beam.- Generation of an Isolated Attosecond Pulse in the Far Field by Spatial Filtering with an Intense Few-Cycle Mid-Infrared Laser.- Effects of Macroscopic Propagation and Multiple Molecular Orbitals on the High-Order Harmonic Generation of Aligned N₂ and CO₂ Molecules.- Photoelectron Angular Distributions in Single-Photon Ionization of Aligned N₂ and CO₂[...]

Fields of interest

Atoms and Molecules in Strong Fields, Laser Matter Interaction; Atomic/Molecular Structure and Spectra; Numerical and Computational Physics; Applied Optics, Optoelectronics, Optical Devices

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01624-5

Hardcover

2013. XIV, 159 p. 56 illus., 55 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-01624-5

usually dispatched within 3 to 5 business days

Towards Autonomous Soft Matter Systems

Experiments on Membranes and Active Emulsions

This book focuses on the assembly, organization and resultant collective dynamics of soft matter systems maintained away from equilibrium by an energy flux. Living matter is the ultimate example of such systems, which are comprised of different constituents on very different scales (ions, nucleic acids, proteins, cells). The result of their diverse interactions, maintained using the energy from physiological processes, is a fantastically well-organized and dynamic whole. This work describes results from minimal, biomimetic systems and primarily investigates membranes and active emulsions, as well as key aspects of both soft matter and non-equilibrium phenomena. It is shown that these[...]

Features

This book focuses on the assembly, organization and resultant collective dynamics of soft matter systems maintained away from equilibrium by an energy flux. Living matter is the ultimate example of such systems, which are comprised of different constituents on very different scales (ions, nucleic acids, proteins, cells). The result of their diverse interactions, maintained using the energy from physiological [...]

Contents

Membranes.- Microfluidic membrane networks.- Electrostatic interactions in membrane fusion.- Phase contrast X-ray imaging of lipid membranes.- Oscillating droplets: Chemical micro-oscillators.- Swimming droplets: Artificial squirmers.- Interacting droplets: Collective dynamics.- Conclusions and Outlook.- Appendices.- Materials and Methods.- Hydrodynamic flow fields with axial symmetry.

Fields of interest

Soft and Granular Matter, Complex Fluids and Microfluidics; Physical Chemistry; Membranes; Surfaces and Interfaces, Thin Films; Statistical Physics, Dynamical Systems and Complexity

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-00734-2

Hardcover

2014. XVIII, 127 p. 84 illus., 26 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-00734-2

usually dispatched within 3 to 5 business days

Towards a Compact Thin-Disk-Based Femtosecond XUV Source

This thesis provides unique information on the Kerr-lens mode-locking (KLM) technique applied to a thin-disk laser. It describes in detail cavity geometry, the qualitative approach to KLM, and self-starting behavior in the regime of both negative and positive dispersion. Comprehensive comparative analysis of KLM and semiconductor saturable absorber techniques is also carried out. Recent successful experiments on carrier-envelope phase stabilization, spectral broadening and compression of output of this oscillator underline the importance of this new, emerging technology.

Features

This thesis provides unique information on the Kerr-lens mode-locking (KLM) technique applied to a thin-disk laser. It describes in detail cavity geometry, the qualitative approach to KLM, and self-starting behavior in the regime of both negative and positive dispersion. Comprehensive comparative analysis of KLM and semiconductor saturable absorber techniques is also carried out. Recent successful experiments [...]

Contents

Introduction.- Basics of mode-locking.- High-power thin-disk resonator and gain medium.- SESAM mode-locked thin-disk oscillator.- Kerr-lens mode-locked thin-disk oscillator.- Towards ultrashort CE phase stable pulses.- XUV output coupler and XUV/IR grazing-incidence beam splitter.- Conclusion.

Fields of interest

Laser Technology and Physics, Photonics; Classical Electrodynamics, Wave Phenomena; Solid State Physics

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01510-1

Hardcover

2014. XVIII, 127 p. 70 illus., 56 illus. in color. (Springer Theses)

\$129.00

ISBN 978-3-319-01510-1

usually dispatched within 3 to 5 business days

P. Olsson

Transport Phenomena in Newtonian Fluids - A Concise Primer

This short primer provides a concise and tutorial-style introduction to transport phenomena in Newtonian fluids, in particular the transport of mass, energy and momentum. The reader will find detailed derivations of the transport equations for these phenomena, as well as selected analytical solutions to the transport equations in some simple geometries. After a brief introduction to the basic mathematics used in the text, Chapter 2, which deals with momentum transport, presents a derivation of the Navier-Stokes-Duhem equation describing the basic flow in a Newtonian fluid. Also provided at this stage are the derivations of the Bernoulli equation, the pressure equation and the wave[...]

Features

This short primer provides a concise and tutorial-style introduction to transport phenomena in Newtonian fluids, in particular the transport of mass, energy and momentum. The reader will find detailed derivations of the transport equations for these phenomena, as well as selected analytical solutions to the transport equations in some simple geometries. After a brief introduction to the basic [...]

Contents

Elementary Mathematics.- Momentum Transport.- Energy Transport.- Mass Transport.- Index.

Fields of interest

Fluid- and Aerodynamics; Engineering Thermodynamics, Heat and Mass Transfer; Engineering Fluid Dynamics

Target groups

Graduate

Type of publication

Brief

More on www.springer.com/978-3-319-01308-4

Softcover

2014. IX, 94 p. 16 illus. (SpringerBriefs in Continuum Mechanics)

\$54.99

ISBN 978-3-319-01308-4

usually dispatched within 3 to 5 business days

P.G. Abel

Visual Lunar and Planetary Astronomy

With the advent of CCDs and webcams, the focus of amateur astronomy has to some extent shifted from science to art. Visual work in astronomy has a rich history. Today, imaging is now more prominent. However there is still much for the visual amateur astronomer to do, and visual work is still a valid component of amateur astronomy. Paul Abel has been addressing this issue by promoting visual astronomy wherever possible – at talks to astronomical societies, in articles for popular science magazines, and on BBC TV's The Sky at Night. Visual Lunar and Planetary Astronomy is a comprehensive modern treatment of visual lunar and planetary astronomy, showing that even in the age of space[...]

Features

With the advent of CCDs and webcams, the focus of amateur astronomy has to some extent shifted from science to art. The object of many amateur astronomers is now to produce "stunning images" that, although beautiful, are not intended to have scientific merit. Paul Abel has been addressing this issue by promoting visual astronomy wherever possible – at talks to astronomical societies, in articles for popular [...]

Contents

Acknowledgements.- Foreword by Sir Patrick Moore.- Chapter 1: Introduction.- Chapter 2: Instruments and Techniques.- Chapter 3: Mercury.- Chapter 4: Venus.- Chapter 5: Mars.- Chapter 6: Jupiter.- Chapter 7: Saturn.- Chapter 8: Uranus.- Index.

Fields of interest

Astronomy, Observations and Techniques; Popular Science in Astronomy

Target groups

Popular/general

Type of publication

Popular science

More on www.springer.com/978-1-4614-7018-2

Softcover

2013. XVIII, 219 p. 113 illus., 29 illus. in color. (The Patrick Moore Practical Astronomy Series)

\$34.99

ISBN 978-1-4614-7018-2

usually dispatched within 3 to 5 business days

S. Gopalakrishnan, Indian Institute of Science, Bangalore, India; S. Narendar, Defence Research, Hyderabad, India

Wave Propagation in Nanostructures

Nonlocal Continuum Mechanics Formulations

Wave Propagation in Nanostructures describes the fundamental and advanced concepts of waves propagating in structures that have dimensions of the order of nanometers. The book is fundamentally based on non-local elasticity theory, which includes scale effects in the continuum model. The book predominantly addresses wave behavior in carbon nanotubes and Graphene structures, although the methods of analysis provided in this text are equally applicable to other nanostructures. The book takes the reader from the fundamentals of wave propagation in nanotubes to more advanced topics such as rotating nanotubes, coupled nanotubes, and nanotubes with magnetic field and surface effects. The[...]

Features

Wave Propagation in Nanostructures describes the fundamental and advanced concepts of waves propagating in structures that have dimensions of the order of nanometers. The book is fundamentally based on non-local elasticity theory, which includes scale effects in the continuum model. The book predominantly addresses wave behavior in carbon nanotubes and graphene structures, although the methods of [...]

Contents

Introduction to Nanostructures.- Introductory Concepts of Wave Propagation Analysis in Structures.- Various Modeling Techniques for Nanostructures.- Theory of Nonlocal Elasticity.- Material Property and Nonlocal Scale Parameter Estimation for SWCNTs.- Wave Propagation in 1D-Nanostructures: Nanorods.- Wave Propagation in 1D-Nanostructures: Nanobeams.- Wave Propagation in Multi-Walled Carbon Nanotubes.- Wave Propagation in Coupled 1D-Nanosystems.- Wave Propagation in 2D-Nanostructures.- Wave Propagation in Nanoshells.

Fields of interest

Nanoscale Science and Technology; Continuum Mechanics and Mechanics of Materials; Mechanics; Nanotechnology; Nanotechnology and Microengineering

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-319-01031-1

Hardcover

2013. XIII, 359 p. 157 illus., 147 illus. in color. (NanoScience and Technology)

\$179.00

ISBN 978-3-319-01031-1

usually dispatched within 3 to 5 business days

M. Hoskin, Churchill College, Cambridge, United Kingdom

William and Caroline Herschel

Pioneers in Late 18th-Century Astronomy

This beautifully structured book presents the essentials of William and Caroline Herschel's pioneering achievements in late 18th-century astronomy. Michael Hoskin shows that William Herschel was the first observational cosmologist and one of the first observers to attack the sidereal universe beyond the solar system: Herschel built instruments far better than any being used at the royal observatory. Aided by his sister Caroline, he commenced a great systematic survey that led to his discovery of Uranus in 1781. Unlike observers before him, whose telescopes did not reveal them as astronomical objects, Herschel did not ignore misty patches of light. Hoskins points out Herschel's [...]

Features

This beautifully structured book presents the essentials of William and Caroline Herschel's pioneering achievements in late 18th-century astronomy. Michael Hoskin shows that William Herschel was the first observational cosmologist and one of the first observers to attack the sidereal universe beyond the solar system: Herschel built instruments far better than any being used at the royal [...]

Contents

1. Vocations in Conflict.- 2. The Construction of the Heavens.- 3. "One of the Greatest Mechanics of His Day".- 4. The Peerless Assistant.- 5. William's Declining Years.- 6. John's "Sacred Duty".

Fields of interest

Astronomy, Observations and Techniques; History of Science; Popular Science in Astronomy; Cosmology

Target groups

Popular/general

Type of publication

Brief

More on www.springer.com/978-94-007-6874-1

Softcover

Jointly published with the Royal Astronomical Society 2014. VIII, 112 p. 29 illus., 1 illus. in color. (SpringerBriefs in Astronomy)

\$49.99

ISBN 978-94-007-6874-1

usually dispatched within 3 to 5 business days

S. Sebban, ENSTA, Palaiseau, France; J. Gautier, ENSTA, Palaiseau, France; D. Ros, ENSTA, Palaiseau, France; P. Zeitoun, ENSTA, Palaiseau, France (Eds.)

X-Ray Lasers 2012

Proceedings of the 13th International Conference on X-Ray Lasers, 11–15 June 2012, Paris, France

These proceedings comprise of invited and contributed papers presented at the 13th International Conference on X-Ray Lasers (ICXRL 2012) which was held 11–15 June 2012 in Paris, France, in the famous Quartier Latin, inside the historical Center of Cordeliers. This conference is part of a continuing series dedicated to recent developments and applications of x-ray lasers and other coherent x-ray sources with attention to supporting technologies and instrumentation. New results in the generation of intense coherent x-rays and progress towards practical devices and their applications are reported in these proceedings, including areas of research in plasma-based x-ray lasers, 4th [...]

Features

These proceedings comprise of invited and contributed papers presented at the 13th International Conference on X-Ray Lasers (ICXRL 2012) which was held 11–15 June 2012 in Paris, in the famous Quartier Latin, inside the historical Center of Cordeliers. This conference is part of a continuing series dedicated to recent developments and applications of x-ray lasers and other coherent x-ray sources with attention [...]

Contents

Coherent Pulses from Seeded Free-Electron Laser in the Extreme Ultraviolet.- Enhancement of Efficiency of XUV Generation in Atomic Gases Irradiated by Intense Laser Fields.- All-Optical Raman XFEL, Based on the Electron Emission in a Transverse High Intensity Optical Lattice.- Optical Transforms Related to Coherent Imaging of Inclined Objects.- Soft X-Ray Lasing Down to 6.85 nm in Ni-like Samarium.- Fourier Optical Study of Traveling-Wave Excitation at Short-Wavelength Plasma-Lasing.- Coherent Short-Wavelength Plasma Radiation for Lab-Scale Nano-Inspection tools.- Ion Temperature and [...]

Fields of interest

Laser Technology and Physics, Photonics; Electronics and Microelectronics, Instrumentation; Atoms and Molecules in Strong Fields, Laser Matter Interaction

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-00695-6

Hardcover

2014. XXX, 290 p. 166 illus., 117 illus. in color. (Springer Proceedings in Physics, Vol. 147)

\$259.00

ISBN 978-3-319-00695-6

usually dispatched within 3 to 5 business days

M.S.R. Rao, Indian Institute of Technology Madras, Chennai, India; T. Okada, Kyushu University, Fukuoka, Japan (Eds.)

ZnO Nanocrystals and Allied Materials

ZnO has been the central theme of research in the past decade due to its various applications in band gap engineering, and textile and biomedical industries. In nanostructured form, it offers ample opportunities to realize tunable optical and optoelectronic properties and it was also termed as a potential material to realize room temperature ferromagnetism. This book presents 17 high-quality contributory chapters on ZnO related systems written by experts in this field. These chapters will help researchers to understand and explore the varied physical properties to envisage device applications of ZnO in thin film, heterostructure and nanostructure forms.

Features

ZnO has been the central theme of research in the past decade due to its various applications in band gap engineering, and textile and biomedical industries. In nanostructured form, it offers ample opportunities to realize tunable optical and optoelectronic properties and it was also termed as a potential material to realize room temperature ferromagnetism. This book presents 17 high-quality [...]

Contents

Zinc Oxide: The Versatile Material with an Assortment of Physical Properties.- Laser Nano-Soldering of ZnO Nanowires and GaN Thin Film for Fabrication of Hetero p-n Junction.- Photoluminescence Processes in ZnO Thin Films and Quantum Structures.- Effect of Oxygen Pressure on Photoluminescence Spectra and Hall Coefficients of Li-Ni codoped ZnO Films Grown by a Pulsed Laser Deposition.- Lasing Characteristics of an Optically-pumped Single ZnO Nanocrystal and Nanomachining for Controlling Oscillation Wavelength.- Deposition of Aluminum-doped ZnO Films by ICP Assisted Sputtering.- Control [...]

Fields of interest

Nanoscale Science and Technology; Characterization and Evaluation of Materials; Nanotechnology; Optical and Electronic Materials; Nanotechnology and Microengineering

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-81-322-1159-4

Hardcover

2014. XIII, 374 p. 269 illus. (Springer Series in Materials Science, Vol. 180)

\$129.00

ISBN 978-81-322-1159-4

usually dispatched within 3 to 5 business days

Popular Science

G. Lundborg, Malmö University Hospital, Malmö, Sweden

The Hand and the Brain

From Lucy's Thumb to the Thought-Controlled Robotic Hand

This book presents the human hand from an overall perspective – from the first appearance of hand-like structures in the fins of big fishes living millions of years ago to today's and the future's mind-controlled artificial hands. Much focus is given to the extremely well-developed sensation of the hand, its importance and its linkage to brain plasticity mechanisms. How can active hands rapidly expand their representational area in the brain? How can the sense of touch substitute for other deficient senses, such as in Braille reading where hand sensation substitutes for missing vision? How can the mere observation of active hands, belonging to others, activate the hand area in the [...]

Features

This book presents the human hand from an overall perspective – from the first appearance of hand-like structures in the fins of big fishes living millions of years ago to today's and the future's mind-controlled artificial hands. Much focus is given to the extremely well-developed sensation of the hand, its importance and its linkage to brain plasticity mechanisms. How can active hands rapidly [...]

Contents

Fins, Fossils And Fingers.- The Hand, The Brain And Mans' Travel In Time.- The Brain, The Tools And The Technique.- How The Hand Created The Language.- Hand Prints From The Past.- The Intelligent Hand.- An Extension Of The Brain.- Sensation And Emotions.- The Feeling Brain.- How The Hand Shapes The Brain.- The Interaction Between Senses.- Mirrors In The Brain.- Creative Hands.- Right Or Left?.- One Hand Missing.- Hand Transplantation.- The Thought-Controlled Robotic Hand.

Fields of interest

Popular Science in Medicine and Health

Target groups

Popular/general

Type of publication

Popular science

More on www.springer.com/978-1-4471-5333-7

Softcover

2014. XIV, 197 p. 70 illus., 37 illus. in color.

\$29.99

ISBN 978-1-4471-5333-7

usually dispatched within 3 to 5 business days

Psychology

R. Stelter

A Guide to Third Generation Coaching

Narrative-Collaborative Theory and Practice

Third generation coaching proposes a form of dialogue where coach and coachee are focused on creating space for reflection through collaborative practices and less concerned with fabricating quick solutions. Aspiring to achieve moments of symmetry between coach and coachee, where their dialogue is driven by a strong emphasis on meaning-making, values, aspirations and identity issues. Coach and coachee meet as fellow-humans in a genuine dialogue. Marking a new trend in coaching, based on the acknowledgement of changes in society, learning and knowledge production, as well as leadership, while distinguishing itself from the existing models (pop coaching, GROW model, etc.). Third [...]

Features

Reinhard Stelter A Guide to Third Generation Coaching Narrative-Collaborative Theory and Practice Third generation coaching proposes a form of dialogue where coach and coachee are focused on creating space for reflection through collaborative practices and less concerned with fabricating quick solutions. Aspiring to achieve moments of symmetry between coach and coachee, [...]

Contents

About the author.- Preface.- Acknowledgements.- CHAPTER 1: Introduction.- 1.1. The breakdown of the knowledge monopoly.- 1.2. The need for a new coaching concept.- 1.3. What is coaching?.- 1.4. The goal and structure of the book.- CHAPTER 2: The origins and development of coaching.- 2.1. Societal legitimacy: coaching as an answer to late- and post-modern challenges.- 2.2. Coaching, identity and self-constructions: The self is at stake in the coaching dialogue.- 2.3. Coaching and learning – between personal experience and collaboration.- 2.4. Coaching in the perspective of organization [...]

Fields of interest

Consulting - Supervision - Coaching; Careers in Business and Management; Organizational Studies, Economic Sociology

Target groups

Professional/practitioner

Type of publication

Professional book

More on www.springer.com/978-94-007-7185-7

English language distribution rights only

Hardcover

2014. XVIII, 250 p. 13 illus., 9 illus. in color.

\$59.99

ISBN 978-94-007-7185-7

Temporarily unavailable, ready for shipping 4-6 weeks.

P. Bajpai, C-103 Thapar Centre for Industrial R&D, Patiala, India

Advances in Bioethanol

The book provides an updated and detailed overview on advances in bioethanol. It looks at the historical perspectives, chemistry, sources and production of ethanol and discusses biotechnology breakthroughs and promising developments. The book also provides the details regarding the uses, advantages, problems, environmental effects and characteristics of bioethanol as a fuel. In addition, it presents information about ethanol in different parts of the world and also highlights the challenges and future of ethanol.

Features

The book provides an updated and detailed overview on advances in bioethanol. It looks at the historical perspectives, chemistry, sources and production of ethanol and discusses biotechnology breakthroughs and promising developments. The book also provides the details regarding the uses, advantages, problems, environmental effects and characteristics of bioethanol as a fuel. In addition, it presents [...]

Contents

Introduction.- Chemistry, Types and Sources of Ethanol.- Production of Bioethanol.- Ethanol Markets.- Characteristics of Fuel Ethanol.- Benefits and Problems with Bioethanol.- Global Production of Bioethanol.- Future of Bioethanol.

Fields of interest

Renewable and Green Energy; Biotechnology; Environmental Engineering / Biotechnology

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-81-322-1583-7

Softcover

2013. VIII, 95 p. 17 illus. (SpringerBriefs in Applied Sciences and Technology)

\$54.99

ISBN 978-81-322-1583-7

usually dispatched within 3 to 5 business days

F. Battin-Leclerc, ENSIC, Nancy Cedex, France; J.M. Simmie, National University of Ireland, Galway, Ireland; E. Blurock, University of Lund, Lund, Sweden (Eds.)

Cleaner Combustion

Developing Detailed Chemical Kinetic Models

This overview compiles the on-going research in Europe to enlarge and deepen the understanding of the reaction mechanisms and pathways associated with the combustion of an increased range of fuels. Focus is given to the formation of a large number of hazardous minor pollutants and the inability of current combustion models to predict the formation of minor products such as alkenes, dienes, aromatics, aldehydes and soot nano-particles which have a deleterious impact on both the environment and on human health. Cleaner Combustion describes, at a fundamental level, the reactive chemistry of minor pollutants within extensively validated detailed mechanisms for traditional fuels, but also [...]

Features

This overview compiles the on-going research in Europe to enlarge and deepen the understanding of the reaction mechanisms and pathways associated with the combustion of an increased range of fuels. Focus is given to the formation of a large number of hazardous minor pollutants and the inability of current combustion models to predict the formation of minor products such as alkenes, dienes, aromatics, [...]

Contents

1.Introduction,- PART I.- 2.Modeling combustion with detailed kinetic mechanisms.- 3Automatic generation of detailed mechanisms.- 4.Specificities related to detailed kinetic models for the combustion of oxygenated fuel components.- 5.Multistep kinetic model of biomass pyrolysis.- PART II.- 6.Speciation in shock tubes.- 7.Rapid compression machines.- 8.Jet-stirred reactors.- 9.Tubular flow reactors.- 10.Flame studies of oxygenated hydrocarbons.- PART III.- 11.Formation and characterization of polyaromatic hydrocarbons.- 12.Laser diagnostics for selective and quantitative measurement of [...]

Fields of interest

Renewable and Green Energy; Theoretical and Computational Chemistry; Atmospheric Protection / Air Quality Control / Air Pollution; Renewable and Green Energy; Biomaterials

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4471-5306-1

Hardcover

2013. XIII, 658 p. 245 illus. (Green Energy and Technology)

\$229.00

ISBN 978-1-4471-5306-1

usually dispatched within 3 to 5 business days

R. Vepa, University of London, London, United Kingdom

Dynamic Modeling, Simulation and Control of Energy Generation

This book addresses the core issues involved in the dynamic modeling, simulation and control of a selection of energy systems such as gas turbines, wind turbines, fuel cells and batteries. The principles of modeling and control could be applied to other non-convention methods of energy generation such as solar energy and wave energy. A central feature of Dynamic Modeling, Simulation and Control of Energy Generation is that it brings together diverse topics in thermodynamics, fluid mechanics, heat transfer, electro-chemistry, electrical networks and electrical machines and focuses on their applications in the field of energy generation, its control and regulation. This book will help [...]

Features

This book addresses the core issues involved in the dynamic modeling, simulation and control of a selection of energy systems such as gas turbines, wind turbines, fuel cells and batteries. The principles of modeling and control could be applied to other non-convention methods of energy generation such as solar energy and wave energy. A central feature of Dynamic Modeling, Simulation and Control of [...]

Contents

Introduction to Energy Generation Principles.- Principles of Energy Conversion.- Modeling of Synchronous and Induction Machines.- Wind Power Generation and Control.- Dynamic Modeling of Gas Turbines and Compressors.- Modeling and Simulation of Fuel Cells.- Batteries: Modeling and State of Charge Estimation.- Non-Conventional Energy Generation: Solar, Wave and Tidal Energy Generation.

Fields of interest

Energy Efficiency (incl. Buildings); Renewable and Green Energy; Control; Environmental Engineering / Biotechnology

Target groups

Professional/practitioner

Type of publication

Monograph

More on www.springer.com/978-1-4471-5399-3

Hardcover

2013. XVI, 373 p. 111 illus., 11 illus. in color. (Lecture Notes in Energy, Vol. 20)

\$129.00

ISBN 978-1-4471-5399-3

usually dispatched within 3 to 5 business days

W. Leal Filho, V. Voudouris (Eds.)

Global Energy Policy and Security

Despite efforts to increase renewables, the global energy mix is still likely to be dominated by fossil-fuels in the foreseeable future, particularly gas for electricity and oil for land, air and sea transport. The reliance on depleting conventional oil and natural gas resources and the geographic distribution of these reserves can have geopolitical implications for energy importers and exporters. Global Energy Policy and Security examines the security of global and national energy supplies, as well as the sensitivity and impacts of sustainable energy policies which emphasize the various political, economic, technological, financial and social factors that influence energy supply, [...]

Features

Despite efforts to increase renewables, the global energy mix is still likely to be dominated by fossil-fuels in the foreseeable future, particularly gas for electricity and oil for land, air and sea transport. The reliance on depleting conventional oil and natural gas resources and the geographic distribution of these reserves can have geopolitical implications for energy importers and [...]

Contents

Energy Policy And Security Through The Lenses Of The Stochastic Portfolio Theory And The ACEGES Model.- Energy Security As A Subset Of National Security.- Challenges To Global Energy Policy And Supply Security.- Change In Energy Structure And Energy Security Under Climate Mitigation Scenarios.- Insights On Cooperative Electricity Consumption In Human Aggregates From A Thermodynamic Analysis: Implications For Energy Policies.- The UK Electricity System And Its Resilience.- The Macroeconomic Effects Of Energy Purchases.- EU's Dynamic Evaluation of Energy Efficiency: Combining Data [...]

Fields of interest

Energy Policy, Economics and Management; Energy Economics; Environmental Science and Engineering

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4471-5285-9

Hardcover

2013. VIII, 330 p. 72 illus. (Lecture Notes in Energy, Vol. 16)

\$179.00

ISBN 978-1-4471-5285-9

usually dispatched within 3 to 5 business days

S.J. Morewitz, M.L. Goldstein, University of Illinois, Northbrook, USA (Eds.)

Handbook of Forensic Sociology and Psychology

The role of behavioral and social sciences in the courtroom setting has expanded exponentially in the past few decades. It is now widely recognized that scientists in these areas provide critical contextual information for legal decision making, and that there is a reliable knowledge base for doing so.

While there are many handbooks of forensic psychology, this is the first such volume to incorporate sociological findings, broadening the conceptual basis for examining cases in both the civil and criminal realms, including immigration issues, personal injury, child custody, and sexual harassment. This volume will examine the responsibilities of expert witnesses and consultants, and[...]

Features

Since their emergence as social sciences, psychology and sociology have found a natural home in the justice system. And while the term forensics often translates into CSI scenarios in the public imagination, the bulk of the work takes place in the courtroom, where lawyers, judges, and jurors rely on psychology and sociology experts for aid in decision making. The Handbook of Forensic [...]

Contents

Evolving Practice Parameters of Forensic Criminology.- The Work of the Sociologist as Mitigation Expert in Cases of Violent Crime.- "Oh, Stop That Cursed Jury": The Role of the Forensic Psychologist in the Mitigation Phase of the Death Penalty Trial.- The Problem of Interrogation-Induced False Confession: Sources of Failure in Prevention and Detention.- "Brainwashing" as Forensic Evidence.- Target Selection by Criminal Groups and Gangs.- Gangs in the Workplace.- The Role of a Gang Expert in Court.- Competence to Proceed and Juvenile Courts.- Competency Evaluations for Adult Defendants.- [...]

Fields of interest

Psychology and Law; Sociology, general; Criminology & Criminal Justice

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7177-6

Hardcover

2014. XI, 466 p. 11 illus.

\$229.00

ISBN 978-1-4614-7177-6

usually dispatched within 3 to 5 business days

D.N. Sharp (Ed.)

Justice and Economic Violence in Transition

This book examines the role of economic violence (violations of economic and social rights, corruption, and plunder of natural resources) within the transitional justice agenda. Because economic violence often leads to conflict, is perpetrated during conflict, and continues afterwards as a legacy of conflict, a greater focus on economic and social rights issues in the transitional justice context is critical. One might add that insofar as transitional justice is increasingly seen as an instrument of peacebuilding rather than a simple political transition, focus on economic violence as the crucial "root cause" is key to preventing re-lapse into conflict. Recent increasing[...]

Features

The field of transitional justice has traditionally focused on addressing large-scale human-rights violations involving murder, torture, kidnapping, and rape. But since violations of economic rights often lead to conflict, are perpetrated during conflict, and continue as a post-conflict legacy, it is crucial to pay greater attention to economic and social rights in the transitional justice context as [...]

Contents

Addressing Economic Violence Through Transitional Justice as Transition to Positive Peace.- Economic Violence and Liberal Peacebuilding.- "It's the Economy, Stupid," Economic Violence and Violent Conflict.- Economic Violence in the Practice of Truth Commissions.- Reparations and Economic and Social Rights after Violent Conflict.- Corruption and Transitional Justice.- Where does "Transitional Justice" End and "Development" Begin?- Transitional Justice and Natural Resources.- Foreign Investment and Economic Governance in Transitions.- Transitional Justice and Land Tenure Reform.- [...]

Fields of interest

Cross Cultural Psychology; Development Economics; Political Science, general

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8171-3

Hardcover

2014. XI, 328 p. (Springer Series in Transitional Justice, Vol. 5)

\$179.00

ISBN 978-1-4614-8171-3

usually dispatched within 3 to 5 business days

A.M. Brewer, The University of Sydney, Sydney, Australia

Leadership, Coaching and Followership

An Important Equation

This volume presents evidence-based ideas on all three converging forces to suit an array of individuals and their organisations. The volume is thick with evidence, detail and case studies that the reader can draw upon and apply to their own situations. Defining exactly what is leadership has been a persistent problem for researchers and theorists. Discovering how to create or produce leaders likewise has been a difficult challenge over the years. Written by an academic, executive and coach, the author focuses on three important converging aspects: leadership, followership and coaching. Focus on leaders is disproportionate to what actually occurs within most organisations especially[...]

Features

This volume presents evidence-based ideas on all three converging forces to suit an array of individuals and their organisations. The volume is rich with evidence, detail and case studies that the reader can draw upon and apply to their own situations. Defining exactly what is leadership has been a persistent problem for researchers and theorists. Discovering how to generate or develop leaders [...]

Contents

Chapter 1. Leadership, Followership and Coaching: Asking the Questions.- Chapter 2. Leadership: What is It and How Can We Learn from This Knowledge.- Chapter 3. Coaching Leaders and Followers for Learning: Understanding the How and Why.- Chapter 4. Followership.- Chapter 5. Gendered Leadership.- Chapter 6. Practising Leadership and Coaching.- Chapter 7. Leadership and Coaching: Over the Frontier.- Chapter 8. Ethical Leadership and Followership.- Chapter 9. Let the Leaders Speak for Themselves.- Chapter 10. Concluding Note.- Appendix.- Index.- Glossary.

Fields of interest

Industrial and organisational psychology; Personnel Management; Educational Psychology

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-7462-9

Hardcover

2014. XIII, 225 p. 2 illus., 1 illus. in color.

\$129.00

ISBN 978-94-007-7462-9

usually dispatched within 3 to 5 business days

A. Singh, D. Pant, PRODEM, Mol, Belgium; S.I. Olsen (Eds.)

Life Cycle Assessment of Renewable Energy Sources

Governments are setting challenging targets to increase the production of energy and transport fuel from sustainable sources. The emphasis is increasingly on renewable sources including wind, solar, geothermal, biomass based biofuel, photovoltaics or energy recovery from waste. What are the environmental consequences of adopting these other sources? How do these various sources compare to each other? Life Cycle Assessment of Renewable Energy Sources tries to answer these questions based on the universally adopted method of Life Cycle Assessment (LCA). This book introduces the concept and importance of LCA in the framework of renewable energy sources and discusses the key issues in[...]

Features

Governments are setting challenging targets to increase the production of energy and transport fuel from sustainable sources. The emphasis is increasingly on renewable sources including wind, solar, geothermal, biomass based biofuel, photovoltaics or energy recovery from waste. What are the environmental consequences of adopting these other sources? How do these various sources compare to each other? [...]

Contents

Importance of Life Cycle Assessment of Renewable Energy Sources.- Key Issues in Conducting Life Cycle Assessment of Renewable Energy Sources.- Life Cycle Assessment of Agricultural Production Systems with Main Emphasis in Biogas and Bioethanol Production.- Life Cycle Assessment of Biomethane from Lignocellulosic Biomass.- Life Cycle Assessment of Biodiesel from Palm Oil.- Environmental Sustainability Assessment of Ethanol from Cassava and Sugarcane Molasses in a Life Cycle Perspective.- Comparison of Algal Biodiesel Production Pathways using Life Cycle Assessment Tool.- Sustainability[...]

Fields of interest

Renewable and Green Energy; Renewable and Green Energy; Sustainable Development

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4471-5363-4

Hardcover

2013. XVI, 293 p. 100 illus., 24 illus. in color. (Green Energy and Technology)

\$179.00

ISBN 978-1-4471-5363-4

usually dispatched within 3 to 5 business days

J.M. Davis, Charles Darwin University, Macau, Macao; R.C. D'Amato, Chicago School of Professional Psychology, Chicago, IL, USA (Eds.)

Neuropsychology of Asians and Asian-Americans

Practical and Theoretical Considerations

Neuropsychology with Asians and Asian Americans Practical and Theoretical Considerations J. Mark Davis and Rik Carl D'Amato, editors The challenge of cultural competence for health providers is more than the recognition of other ethnicities: it entails the balancing of group and individual factors to apply relevant information in diagnostic and therapeutic settings. Particularly in need of culturally appropriate services are Asians and Asian Americans, populations that are diverse, growing, and underserved by Asian practitioners. Neuropsychology with Asians and Asian Americans takes cultural neuroscience to new levels in its variety and usefulness. Focusing on the largest groups of[...]

Features

Neuropsychology with Asians and Asian Americans Practical and Theoretical Considerations J. Mark Davis and Rik Carl D'Amato, editors The challenge of cultural competence for health providers is more than the recognition of other ethnicities: it entails the balancing of group and individual factors to apply relevant information in diagnostic and therapeutic settings. [...]

Contents

Chapter 1 Overview of Issues Related to Serving Asian and Asian American Clients.- 1.1 Introduction.- 1.2 Cultural Competence.- 1.3 Who are "Asian Americans"?.- 1.4 Cultural variables that influence neuropsychological services.- 1.4.1 Client Characteristics.- 1.4.2 Variables related to tests and test batteries.- 1.5 Conclusions.- 1.6 References.- Chapter 2 Ethical considerations in neuropsychological assessment of Asian heritage clients.- 2.1 Introduction.- 2.2 The importance of values in cross-cultural neuropsychology practice.- 2.3 Culturally invariant ethical and moral principles.- [...]

Fields of interest

Neuropsychology; Cross Cultural Psychology

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8074-7

Hardcover

2014. XV, 193 p. 4 illus. (Issues of Diversity in Clinical Neuropsychology)

\$129.00

ISBN 978-1-4614-8074-7

usually dispatched within 3 to 5 business days

K. Cotton Bronk, Ball State University, Muncie, USA

Purpose in Life

A Critical Component of Optimal Youth Development

This volume integrates and makes sense of the growing body of theoretical and empirical research conducted on purpose across the lifespan. It opens with a comprehensive yet detailed discussion of the definitions of purpose most commonly used in studies on the topic. In addition to defining the construct, the author also discusses its philosophical roots and distinguishes it from related concepts, including meaning, goals, and ultimate concerns. This volume discusses the disparate perspectives on the construct and addresses the tendency to position purpose in the broader frame of positive psychology. It synthesizes distinct strands of research on purpose across the lifespan, it[...]

Features

This volume integrates and makes sense of the growing body of theoretical and empirical research conducted on purpose across the lifespan. It opens with a comprehensive yet detailed discussion of the definitions of purpose most commonly used in studies on the topic. In addition to defining the construct, the author also discusses its philosophical roots and distinguishes it from related concepts, [...]

Contents

Foreword; William Damon.- Chapter 1. Introduction and Definition.- Chapter 2. Measuring Purpose.- Chapter 3. The Role of Purpose in Optimal Human Functioning.- Chapter 4. Purpose across the Lifespan.- Chapter 5. Origins and Supports for Purpose.- Chapter 6. Inspiring Types of Purposes in Life.- Chapter 7. The Experience of Purpose among Diverse Groups of Individuals.- Chapter 8. Youth Purpose Exemplars.- Chapter 9. Future Directions for Purpose Research.

Fields of interest

Positive Psychology; Quality of Life Research; Educational Psychology; Developmental Psychology

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-94-007-7490-2

Hardcover

2014. X, 175 p. 1 illus.

\$129.00

ISBN 978-94-007-7490-2

usually dispatched within 3 to 5 business days

A. Medina, Universidad de Salamanca, Salamanca, Spain; P.L. Curto-Risso, Universidad de la República, Montevideo, Uruguay; A.C. Hernández, Universidad de Salamanca, Salamanca, Spain; L. Guzmán-Vargas, Instituto Politécnico Nacional, México D.F., Mexico; F. Angulo-Brown, Instituto Politécnico Nacional, México D.F., Mexico; A.K. Sen, Indiana University, Indianapolis, USA

Quasi-Dimensional Simulation of Spark Ignition Engines

From Thermodynamic Optimization to Cyclic Variability

Based on the simulations developed in research groups over the past years, Introduction to Quasi-dimensional Simulation of Spark Ignition Engines provides a compilation of the main ingredients necessary to build up a quasi-dimensional computer simulation scheme. Quasi-dimensional computer simulation of spark ignition engines is a powerful but affordable tool which obtains realistic estimations of a wide variety of variables for a simulated engine keeping insight the basic physical and chemical processes involved in the real evolution of an automotive engine. With low computational costs, it can optimize the design and operation of spark ignition engines as well as it allows to analyze[...]

Features

Based on the simulations developed in research groups over the past years, Introduction to Quasi-dimensional Simulation of Spark Ignition Engines provides a compilation of the main ingredients necessary to build up a quasi-dimensional computer simulation scheme. Quasi-dimensional computer simulation of spark ignition engines is a powerful but affordable tool which obtains realistic [...]

Contents

1.Introduction.- 2.Physical laws and model structure of simulations.- 3.Validating and comparing with experiments and other models.- 4.Thermodynamic engine optimization.- 5.Cycle-to-cycle variability.- App.A.Derivation of the basic differential thermodynamic equations.- App.B.Flow rates and valve geometry.- App.C.Flame front area calculations.- App.D.Heat transfer areas.- App.E.Combustion chemistry.- App.F.Alternative fuels.- App.G.Reference geometric and configuration parameters for numerical computations.

Fields of interest

Energy Harvesting; Automotive Engineering; Simulation and Modeling; Thermodynamics; Engineering Thermodynamics, Heat and Mass Transfer

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4471-5288-0

Hardcover

2014. XIII, 195 p. 86 illus.

\$129.00

ISBN 978-1-4471-5288-0

usually dispatched within 3 to 5 business days

G. Model, S. Grover, National Center for Photovoltaics, Golden, USA (Eds.)

Rectenna Solar Cells

Rectenna Solar Cells discusses antenna-coupled diode solar cells, an emerging technology that has the potential to provide ultra-high efficiency, low-cost solar energy conversion. This book will provide an overview of solar rectennas, and provide thorough descriptions of the two main components: the diode, and the optical antenna. The editors discuss the science, design, modeling, and manufacturing of the antennas coupled with the diodes. The book will provide concepts to understanding the challenges, fabrication technologies, and materials required to develop rectenna structures. Written by experts in their specialized fields.

Features

Rectenna Solar Cells discusses antenna-coupled diode solar cells, an emerging technology that has the potential to provide ultra-high efficiency, low-cost solar energy conversion. This book will provide an overview of solar rectennas, and provide thorough descriptions of the two main components: the diode, and the optical antenna. The editors discuss the science, design, modeling, and manufacturing of the [...]

Contents

Are rectenna solar cells viable?.- Optical frequency rectification.- Efficiency limits for solar spectrum rectification.- Solar and thermal aperture antenna performance limits.- Metal insulator and multi-insulator diodes for rectenna solar cells.- Impact of Tunnel Barrier Dielectric and Roughness on MIM and MIIM Diodes.- Nanoscale Rectenna with Sharp Tips for Absorption and Rectification of Optical Radiation.- A Mid-IR Antenna Integrated with a Geometrically Asymmetrical Metal-Insulator-Metal Rectifying Diode.- Investigation of the infrared radiation detection mechanism for[...]

Fields of interest

Energy Systems; Microwaves, RF and Optical Engineering; Applied Optics, Optoelectronics, Optical Devices; Energy Technology

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-3715-4

Hardcover

2013. VI, 399 p. 229 illus., 99 illus. in color.

\$179.00

ISBN 978-1-4614-3715-4

usually dispatched within 3 to 5 business days

I. Dincer, University of Ontario Institute of Tech., Oshawa, Canada; A.S. Joshi

Solar Based Hydrogen Production Systems

This book provides a comprehensive analysis of various solar based hydrogen production systems. The book covers first-law (energy based) and second-law (exergy based) efficiencies and provides a comprehensive understanding of their implications. It will help minimize the widespread misuse of efficiencies among students and researchers in energy field by using an intuitive and unified approach for defining efficiencies. The book gives a clear understanding of the sustainability and environmental impact analysis of the above systems. The book will be particularly useful for a clear understanding of second law (exergy) efficiencies for various systems. It may serve as a reference book to[...]

Features

Solar Based Hydrogen Production Systems deals with various hydrogen production systems in general and solar hydrogen production systems in particular and their energy and exergy analyses. It also covers the various chemical processes involved in hydrogen production, the primary energy sources conventional and non-conventional, that are used to produce hydrogen. In addition, various other hydrogen [...]

Contents

Preface.- Hydrogen.- Hydrogen Production Methods.- Solar Energy Aspects.- Solar Hydrogen Production.- Thermodynamic Analysis.- Environmental Impact and Sustainability Assessment.- Case Studies.- Concluding Remarks.- Nomenclature.- References.- Appendix.

Fields of interest

Renewable and Green Energy; Engineering Thermodynamics, Heat and Mass Transfer; Renewable and Green Energy; Energy Efficiency (incl. Buildings); Sustainable Development

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-7430-2

Softcover

2013. IX, 141 p. 72 illus., 27 illus. in color. (SpringerBriefs in Energy)

\$49.95

ISBN 978-1-4614-7430-2

usually dispatched within 3 to 5 business days

M.J. Kaiser, Louisiana State University, Baton Rouge, USA; B.F. Snyder, Louisiana State University, Baton Rouge, USA

The Offshore Drilling Industry and Rig Construction in the Gulf of Mexico

Jackups, semisubmersibles and drillships are the marine vessels used to drill offshore wells and are referred to collectively as mobile offshore drilling units (MODUs). MODUs are supplied through newbuild construction and operate throughout the world in highly competitive regional markets. The Offshore Drilling Industry and Rig Construction Market in the Gulf of Mexico examines the global MODU service and construction industry and describes the economic impacts of rig construction in the United States. The industrial organization and major players in the contract drilling and construction markets are described and categorized. Dayrates in the contract drilling market are evaluated and [...]

Features

Jackups, semisubmersibles and drillships are the marine vessels used to drill offshore wells and are referred to collectively as mobile offshore drilling units (MODUs). MODUs are supplied through newbuild construction and operate throughout the world in highly competitive regional markets. The Offshore Drilling Industry and Rig Construction Market in the Gulf of Mexico examines the global MODU [...]

Contents

1.Mobile Offshore Drilling.- 2.The Five Offshore Rig Markets.- 3.Rig Dayrates and Utilization.- 4.Players and Market Structure.- 5.Empirical Analysis of the Factors Impacting Dayrates.- 6.Newbuild and Stacking Decision-Making.- 7.Factors That Impact Firm Value.- 8.Contract Valuation Models.- 9.Construction Markets and Contracts.- 10.Jackup Design Primer.- 11.Jackup Rig Construction.- 12.Construction Cost Factors.- 13.Newbuild and Replacement Cost Functions.- 14.Jackup Rig Weight Algorithm.- 15.Labor and Material Requirements for Jackup Construction in the U.S.

Fields of interest

Energy Policy, Economics and Management; Engineering Economics, Organization, Logistics, Marketing

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4471-5151-7

Hardcover

2013. XVIII, 246 p. 133 illus. (Lecture Notes in Energy, Vol. 8)

\$179.00

ISBN 978-1-4471-5151-7

usually dispatched within 3 to 5 business days

Social Sciences

N.-B. Kandala, G. Ghilagaber (Eds.)

Advanced Techniques for Modelling Maternal and Child Health in Africa

This book presents both theoretical contributions and empirical applications of advanced statistical techniques including geo-additive models that link individual measures with area variables to account for spatial correlation; multilevel models that address the issue of clustering within family and household; multi-process models that account for interdependencies over life-course events and non-random utilization of health services; and flexible parametric alternatives to existing intensity models. These analytical techniques are illustrated mainly through modeling maternal and child health in the African context, using data from demographic and health surveys. In the past, the [...]

Features

This book presents both theoretical contributions and empirical applications of advanced statistical techniques including geo-additive models that link individual measures with area variables to account for spatial correlation; multilevel models that address the issue of clustering within family and household; multi-process models that account for interdependencies over life-course events and non-random [...]

Contents

1: Advanced Techniques for Modelling Maternal and Child Health in Africa: Samuel OM Manda, Ngianga-Bakwin Kandala and Gebrenegus Ghilagaber.- PART I: CHILD HEALTH AND SURVIVAL: 2: Disentangling Selection and Causality in Assessing the Effects of Health Inputs on Child Survival. Case Studies from Egypt, Eritrea, and Uganda: Gebrenegus Ghilagaber.- 3: Modelling Spatial Effects on Childhood Mortality via Geo-Additive Bayesian Discrete-time Survival Model: A Case Study from Nigeria: G Ghilagaber, D Antai and N-B Kandala.- 4: Bayesian Geo-additive Mixed Latent Variable Models with [...]

Fields of interest

Demography; Maternal and Child Health; Statistics for Life Sciences, Medicine, Health Sciences; Methodology of the Social Sciences

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-94-007-6777-5

Hardcover

2014. XIV, 330 p. 40 illus., 21 illus. in color. (The Springer Series on Demographic Methods and Population Analysis, Vol. 34)

\$179.00

ISBN 978-94-007-6777-5

usually dispatched within 3 to 5 business days

D.A. Scott-Ireton (Ed.)

Between the Devil and the Deep

Meeting Challenges in the Public Interpretation of Maritime Cultural Heritage

In creating interpretive strategies for maritime sites, archaeologists and resource managers often are required to think creatively to overcome challenges and problems. These issues include interpreting sites in inaccessible locations and extremely deep water, enabling and controlling access to fragile sites and restricted areas, monitoring visitor behavior, making information interesting to a wide audience, and creating opportunities for public engagement, among other concerns. Meeting Challenges presents cutting-edge interpretation and public education strategies for maritime resources, both on land and underwater, with emphasis on solving the unique problems often associated with [...]

Features

In creating interpretive strategies for maritime sites, archaeologists and resource managers often are required to think creatively to overcome challenges and problems. These issues include interpreting sites in inaccessible locations and extremely deep water, enabling and controlling access to fragile sites and restricted areas, monitoring visitor behavior, making information interesting to a wide [...]

Contents

Introduction.- Chapter 1. Toward Multivocality in Public Archeology: Public Empowerment through Collaboration, John H. Jameson, Jr.- Chapter 2. Connecting the Wrecks: A Case Study in Conveying the Importance of Submerged Cultural Heritage through a Scaled Outreach Approach, Alexis Catsambis, Kate Morrand.- Chapter 3. Out of Sight, Out of Mind, and At Risk: The United Kingdom Public's Engagement with Heritage, Christopher J. Underwood.- Chapter 4. Connecting People to the Past: An Ethnographic Approach to Interpretation and Recreation, Irina T. Sorset.- Chapter 5. Management of Submerged [...]

Fields of interest

Archaeology; Cultural Heritage

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-8177-5

Hardcover

2014. XII, 214 p. 26 illus., 21 illus. in color. (When the Land Meets the Sea, Vol. 5)

\$129.00

ISBN 978-1-4614-8177-5

usually dispatched within 3 to 5 business days

R.L. Holzhaecker, P. Luif, Austrian Institute for International Aff, Vienna, Austria (Eds.)

Freedom, Security and Justice in the European Union

Internal and External Dimensions of Increased Cooperation after the Lisbon Treaty

As the European Union has evolved, it has also begun to address policy questions which are closer to the very heart of the state. From cooperation in Justice and Home Affairs, originally conceived as the third pillar of European cooperation, has emerged the Area of Freedom, Security, and Justice (AFSJ). A unique aspect of policy in this area is the desire to integrate the internal and external dimensions of this policy area. One of the tensions in this policy area has been balancing the protection of fundamental rights and increasing security. The first part of this book focuses on the institutional relations of policymaking in AFSJ, both within member states and between member[...]

Features

As the European Union has evolved, it has also begun to address policy questions which are closer to the very heart of the state. From cooperation in Justice and Home Affairs, originally conceived as the third pillar of European cooperation, has emerged the Area of Freedom, Security, and Justice (AFSJ). A unique aspect of policy in this area is the desire to integrate the internal and external dimensions of [...]

Contents

1. Freedom, Security, and Justice: Intern- and Extern- alization in the EU and the Member States after the Lisbon Treaty.- 2. New Parliamentary Practices in Justice and Home Affairs: Some Observations.- 3. Non-Binding Peer Evaluation within an Area of Freedom, Security, and Justice.- 4. Redefining the relationship between security, data retention and human rights.- 5. The Externalization of undocumented migration controls as a threat for the EU's constitutional commitment to fundamental human rights?.- 6. Prüm Treaty and Prüm decision.- 7. The Interface between the Area of Freedom,[...]

Fields of interest

Comparative Politics; European Integration; International Relations

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-7878-2

Hardcover

2014. V, 146 p.

\$129.00

ISBN 978-1-4614-7878-2

usually dispatched within 3 to 5 business days

A. Ben-Arieh, The Hebrew University of Jerusalem and T, Jerusalem, Israel; F. Casas, Universitat de Girona, Girona, Spain; I. Frones, University of Oslo, Oslo, Norway; J.E. Korbin, Case Western Reserve University, Cleveland, USA (Eds.)

Handbook of Child Well-Being

Theories, Methods and Policies in Global Perspective

The well-being of children represents a challenge not yet fully confronted and The Handbook of Child Well-being supplies its readers with a thorough overview of the complexities and implications regarding the scientific and practical pursuit of children's well-being. The handbook addresses the concept of well-being through an in-depth analysis of the perspectives and vocabularies of various disciplines such as, philosophy, theology, psychology and sociology. It covers important issues in child well-being and the problems of the general politics of well-being as well as the implementation of interventional programs and measures. In addition the handbook deals with the methods of[...]

Features

Addressing child well-being from varying perspectives, this handbook offers a comprehensive overview of the field. Readers from a wide scope of disciplines will learn the complexities and implications involved in the scientific pursuit of a child's well-being.

Contents

Volume 1.- Chapter 1: Multifaceted Concept of Child Well-Being; Asher Ben-Arieh, Ferran Casas, Ivar Frones, and Jill E. Korbin.- Section I: Multiple Perspectives on Child Well-Being.- Chapter 2: History of Children's Well-Being; Bengt Sandin.- Chapter 3: Culture, Context, and Child Well-Being; Thomas S. Weisner.- Chapter 4: Children, Gender, and Issues of Well-Being; Harriet Bjerrum Nielsen and Barrie Thorne.- Chapter 5: Childhood and Intergenerationality: Toward an Intergenerational Perspective on Child Well-Being; Leena Alanen.- Section II: Multiple Approaches to Child Well-Being.- [...]

Fields of interest

Quality of Life Research; Child and School Psychology

Target groups

Research

Type of publication

Handbook

More on www.springer.com/978-90-481-9062-1

2014. XXXV, 3258 p. 142 illus., 76 illus. in color. eReference.

\$2,050.00

ISBN 978-90-481-9063-8

Online orders shipping within 2-3 days.

H. Mytum, University of Liverpool, Liverpool, United Kingdom

Monumentality in Later Prehistory

Building and Rebuilding Castell Henllys Hillfort

This volume provides the results of a 30-year excavation, reconstruction, and public interpretation campaign at the late prehistoric inland promontory settlement of Castell Henllys, here focusing on the defensive sequence and the role of monumentality in later prehistory. The site has international significance because of the extensive excavations of the Iron Age palisaded settlement and later earthen ramparts, complex gateway, and chevaux-de-frise of upright stones. It is now widely recognised that the Iron Age consisted of many regional cultural traditions, and the excavations at Castell Henllys provide a vital contrast to the well-known large hillfort communities in other parts of[...]

Features

This volume provides the results of a 30-year excavation, reconstruction, and public interpretation campaign at the late prehistoric inland promontory settlement of Castell Henllys, here focusing on the defensive sequence and the role of monumentality in later prehistory. The site has international significance because of the extensive excavations of the Iron Age palisaded settlement and later earthen [...]

Contents

Chapter 1- Enclosure and Monumentality: Hillforts in British and European Late Prehistory.- Chapter 2- Castell Henllys in its Temporal, Cultural and Intellectual Contexts.- Chapter 3 - The Palisade and Entrance.- Chapter 4- The Interior: Roundhouses, Scoops and Activity Areas.- Chapter 5- A Boundary In Stones: The Chevaux-De-Frise.- Chapter 6- The Palisaded Settlement: Its Size, Character and Environmental Impact.- Chapter 7- Previous Research on Hillfort Ramparts and Ditches.- Chapter 8- Ramparts and Ditches on the Western Side of the Fort.- Chapter 9- The Building of a Rampart:[...]

Fields of interest

Archaeology; Cultural Heritage

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-8026-6

Hardcover

2013. XIV, 336 p. 141 illus., 87 illus. in color.

\$129.00

ISBN 978-1-4614-8026-6

usually dispatched within 3 to 5 business days

S. Donkin, Griffith University, Mt Gravatt, Australia

Preventing Terrorism and Controlling Risk

A Comparative Analysis of Control Orders in the UK and Australia

This Brief takes a provocative look at existing socio-legal literature with a comparative study of terrorism control orders, focusing on how the concept of pre-emption fits within a traditional criminological framework. This timely work examines how such measures might be conceived and interpreted within a situational crime prevention approach. Over the past decade, socio-legal scholars have identified a rise in pre-emptive control mechanisms to respond to terrorism and other threats in the post-9/11 world. Many have argued that this pre-emptive rationale has been used to justify the introduction of measures that transcend established legal and risk frameworks, to deal with[...]

Features

This Brief takes a provocative look at existing socio-legal literature with a comparative study of terrorism control orders, focusing on how the concept of pre-emption fits within a traditional criminological framework. This timely work examines how such measures might be conceived and interpreted within a situational crime prevention approach. Over the past decade, socio-legal scholars have identified a [...]

Contents

Introduction.- Legal Framework.- Criminological Insights.- From Crime Prevention to Crime Pre-emption.- Control Order Case Studies.- Discussion.

Fields of interest

Criminology & Criminal Justice; Private International Law, International & Foreign Law, Comparative Law

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8704-3

Softcover

2014. XV, 89 p. 3 illus. (Springer Briefs in International and Comparative Criminology, Vol. 1)

\$54.99

ISBN 978-1-4614-8704-3

usually dispatched within 3 to 5 business days

M. Mischke, Universität Siegen, Siegen, Germany

Public Attitudes towards Family Policies in Europe

Linking Institutional Context and Public Opinion

Family-policy variation in Europe is still enormous and there is very limited knowledge about the publics' attitudes toward family-policy measures in a comparative perspective. This book addresses this research gap by combining a profound analysis of existing family-policy measures with a thorough analysis of public attitudes. Based on institutional theory, which argues that institutions structure the processes of orientation, the empirical analyses shed light on the relationship between the current family-policy setup, the social context, and public attitudes toward particular family-policy measures in 12 countries of the European Union. The results demonstrate that the social context[...]

Features

Family policy variation in Europe is still enormous and there is very limited knowledge about the publics' attitudes toward family-policy measures in a comparative perspective. Monika Mischke addresses this research gap by combining a profound analysis of existing family-policy measures with a thorough analysis of public attitudes. Based on institutional theory, which argues that institutions structure the [...]

Contents

Introduction.- Theoretical background and literature review.- Family policies in Europe - a cluster analysis.- Family policies and public opinion.- Family policy, contextual features, and public opinion.- Social cleavages within European welfare states.- Summary and discussion.

Fields of interest

Sociology, general

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-3-658-03576-1

Softcover

2014. X, 230 p. 10 illus.

\$59.99

ISBN 978-3-658-03576-1

usually dispatched within 3 to 5 business days

Z. Hao, S. Chen, Pace University, New York, USA (Eds.)

Social Issues in China

Gender, Ethnicity, Labor, and the Environment

Since 1978, the opening up and reform in China has brought tremendous economic and social changes. While China's economic progress has been commendable, the social problems that go with economic changes have raised serious concerns. Some of those concerns are related to gender, ethnic, labor, and environmental issues. This book is about what has happened in these arenas in China since the opening up and reform in 1978. The study of gender, ethnicity, labor, and environment touches on some of the fundamental problems of modernization, especially the development of individuals and groups. So even though gender, ethnicity, labor, and environment seem to be separate issues, they are in[...]

Features

Social Issues in China: Gender, Ethnicity, Labor, and the Environment Zhidong Hao and Sheying Chen, editors One of the great ironies of world politics belongs to China. Having carried out a revolution to reform societal ills, it has ended up with broadly the same problems as the West: gender inequities, ethnic conflict, labor disputes, and environmental decline. Now, in tandem with [...]

Contents

Part I Gender Relations in China.- 1: Introduction: Gender, Ethnicity, Labor, and the Environment as Social Issues and Public Policy Challenges.- 2. Rural Chinese Women's Political Participation: Problems and Prospects.- 3. Self-Assertive Mistresses and Corrupt Officials: The Complex Interdependencies.- 4. Domestic Labor, Gendered Intergenerational Contract and Shared Elderly Care in Rural South China.- 5. The Growth and Dilemma of Women's NGOs in China.- Part II Ethnic Relations in China.- 6. Language, Learning and Identity: Problematising the Education for Tibetans.- 7. [...]

Fields of interest

Sociology, general; Social Policy; Public Health; Quality of Life Research; Gender Studies; Demography

Target groups

Research

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-2223-5

Hardcover

2014. XII, 332 p. 7 illus. in color. (International Perspectives on Social Policy, Administration, and Practice, Vol. 1)

\$129.00

ISBN 978-1-4614-2223-5

usually dispatched within 3 to 5 business days

L. Paoli, LINC, Leuven Institute of Criminology, Belgium, Belgium;
A. Donati

The Sports Doping Market

Understanding Supply and Demand, and the Challenges of Their Control

This book examines sports doping from production and distribution, detection and punishment. Detailing the daily operations of the trade and its gray area as a semi-legal market, the authors cover important issues ranging from athletes most at risk to the role of organized crime in sports doping, and whether sports governing bodies are enabling the trade. Challenges for law enforcement and legislation, and efforts to control PED use in the worldwide sports community and among aspiring athletes, are also discussed in depth. The book's extensive research: • Estimates the demand for performance-enhancing products. • Traces the route from legal substances to illegal uses. • Identifies [...]

Features

This book examines sports doping from production and distribution to use, detection, and punishment. Detailing the daily operations of the trade and its gray area as a semi-legal market, the authors cover important issues ranging from the diversion of regular drugs from legal market chains, the expanding scale of counterfeiting and the resulting health risks, to the role of organized crime in sports [...]

Contents

Introduction.- Overview: What is Known about Doping and What Can This Study Add to It.- Doping Products and Their Demand.- The (Illegal) Suppliers of Doping Products.- Distribution Chains and Market Relationships.- The Role of Sports Body and Organized Crime.- Revenues and Profits.- Anti-Doping Law Enforcement: Legislation, Actors, Outcomes, and the Challenges Ahead.- Synthesis of Findings and Lessons for Policy-Making.

Fields of interest

Criminology & Criminal Justice; International Sports Law

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-8240-6

Hardcover

2014. XXIX, 275 p. 2 illus.

\$129.00

ISBN 978-1-4614-8240-6

usually dispatched within 3 to 5 business days

R. Nazarinia Roy, California State University, Long Beach, Long Beach, USA; W.R. Schumm, S.L. Britt, Kansas State University, Manhattan, USA

Transition to Parenthood

Transition to Parenthood moves beyond a one-study focus and captures multidisciplinary work on all families making the transition to parenthood. The book covers societal trends, changes, and most importantly expectations. Focus is also placed on how families are impacted by their surroundings and their individual members. Strengths and limitations of current theories are discussed, as well as how the phenomenon of parenthood requires a combination of both macro- and micro-level theories.

Features

As couples marry and society evolves, a new generation of families is answering important questions pondered by professionals and couples alike. When should we have children? How many children should we have? What if we can't conceive? When is adoption an option? Can we--should we--fulfill what is expected of us? A comprehensive, multidisciplinary handbook boasting findings across traditional areas of [...]

Contents

A History of Fertility in America.- Theoretical Perspectives.- Voluntary versus Involuntary Childlessness.- Diversity.- Demographics.- Expectations.- Relationship Maintenance.- Children and Money.- Children with Special Needs.- Program Evaluation and Parenting Programs.

Fields of interest

Family; Developmental Psychology; Social Work

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-7767-9

Hardcover

2014. XIV, 214 p. 3 illus.

\$129.00

ISBN 978-1-4614-7767-9

usually dispatched within 3 to 5 business days

Statistics

B. Lausen, D. Van den Poel, A. Ultsch (Eds.)

Algorithms from and for Nature and Life

Classification and Data Analysis

This volume provides approaches and solutions to challenges occurring at the interface of research fields such as, e.g., data analysis, data mining and knowledge discovery, computer science, operations research, and statistics. In addition to theory-oriented contributions various application areas are included. Moreover, traditional classification research directions concerning network data, graphs, and social relationships as well as statistical musicology describe examples for current interest fields tackled by the authors. The book comprises a total of 55 selected papers presented at the Joint Conference of the German Classification Society (GfKl), the German Association for [...]

Features

This volume provides approaches and solutions to challenges occurring at the interface of research fields such as, e.g., data analysis, data mining and knowledge discovery, computer science, operations research, and statistics. In addition to theory-oriented contributions various application areas are included. Moreover, traditional classification research directions concerning network data, graphs, and social [...]

Contents

Invited.- Clustering and Unsupervised Learning.- Statistical Data Analysis, Visualization and Scaling.- Bioinformatics and Biostatistics.- Archaeology and Geography, Psychology and Educational Sciences.- Text Mining, Social Networks and Clustering.- Banking and Finance.- Marketing and Management.- Music Classification Workshop.

Fields of interest

Statistics and Computing / Statistics Programs; Computer Appl. in Social and Behavioral Sciences; Operation Research / Decision Theory; Operations Research, Mathematical Programming; Data Mining and Knowledge Discovery; Statistics for Business, Economics, Mathematical Finance, Insurance

Target groups

Research

Type of publication

Proceedings

More on www.springer.com/978-3-319-00034-3

Softcover

2013. XX, 547 p. 111 illus. (Studies in Classification, Data Analysis, and Knowledge Organization)

\$179.00

ISBN 978-3-319-00034-3

usually dispatched within 3 to 5 business days

A.K. Gupta, Bowling Green State University, Bowling Green, USA;
T. Varga, T. Bodnar

Elliptically Contoured Models in Statistics and Portfolio Theory

Elliptically Contoured Models in Statistics and Portfolio Theory fully revises the first detailed introduction to the theory of matrix variate elliptically contoured distributions. There are two additional chapters, and all the original chapters of this classic text have been updated. Resources in this book will be valuable for researchers, practitioners, and graduate students in statistics and related fields of finance and engineering. Those interested in multivariate statistical analysis and its application to portfolio theory will find this text immediately useful. In multivariate statistical analysis, elliptical distributions have recently provided an alternative to the normal[...]

Features

Elliptically Contoured Models in Statistics and Portfolio Theory fully revises the first detailed introduction to the theory of matrix variate elliptically contoured distributions. There are two additional chapters, and all the original chapters of this classic text have been updated. Resources in this book will be valuable for researchers, practitioners, and graduate students in statistics and related [...]

Contents

Preliminaries.- Basic Properties.- Probability Density Function and Expected Values.- Mixtures of Normal Distributions.- Quadratic Forms and other Functions of Elliptically Contoured Matrices.- Characterization Results.- Estimation.- Hypothesis Testing.- Linear Models.- Skew Elliptically Contoured Distributions.- Application in Portfolio Theory.- Author Index.- Subject Index.

Fields of interest

Statistical Theory and Methods; Statistics for Business, Economics, Mathematical Finance, Insurance

Target groups

Research

Type of publication

Monograph

More on www.springer.com/978-1-4614-8153-9

Hardcover

2013. XX, 321 p. 7 illus.

\$129.00

ISBN 978-1-4614-8153-9

usually dispatched within 3 to 5 business days

A. Smajgl, CSIRO Ecosystem Sciences, Townsville, Australia; O. Barreteau, Campus Agropolis, Montpellier Cedex 05 (Eds.)

Empirical Agent-Based Modelling - Challenges and Solutions

Volume 1, The Characterisation and Parameterisation of Empirical Agent-Based Models

This instructional book showcases techniques to parameterise human agents in empirical agent-based models (ABM). In doing so, it provides a timely overview of key ABM methodologies and the most innovative approaches through a variety of empirical applications. It features cutting-edge research from leading academics and practitioners, and will provide a guide for characterising and parameterising human agents in empirical ABM. In order to facilitate learning, this text shares the valuable experiences of other modellers in particular modelling situations. Very little has been published in the area of empirical ABM, and this contributed volume will appeal to graduate-level students[...]

Features

This instructional book showcases techniques to parameterise human agents in empirical agent-based models (ABM). In doing so, it provides a timely overview of key ABM methodologies and the most innovative approaches through a variety of empirical applications. It features cutting-edge research from leading academics and practitioners, and will provide a guide for characterising and parameterising human [...]

Contents

Empiricism and agent-based modelling.- A case study on characterising and parameterising an agent-based integrated model of recreational fishing and coral reef ecosystem dynamics.- An Agent-Based Model of Tourist Movements in New Zealand.- Human-ecosystem interaction in large ensemble model systems.- Using Spatially Explicit Marketing Data to Build Social Simulations

Fields of interest

Statistical Theory and Methods; Simulation and Modeling; Statistics (general)

Target groups

Professional/practitioner

Type of publication

Contributed volume

More on www.springer.com/978-1-4614-6133-3

Hardcover

2014. XIII, 249 p. 30 illus., 20 illus. in color.

\$109.00

ISBN 978-1-4614-6133-3

usually dispatched within 3 to 5 business days

Th.J. Quirk, Webster University, St. Louis, USA; M. Quirk, H. Horton

Excel 2010 for Physical Sciences Statistics

A Guide to Solving Practical Problems

This is the first book to show the capabilities of Microsoft Excel to teach physical sciences statistics effectively. It is a step-by-step exercise-driven guide for students and practitioners who need to master Excel to solve practical science problems. If understanding statistics isn't your strongest suit, you are not especially mathematically-inclined, or if you are wary of computers, this is the right book for you. Excel, a widely available computer program for students and managers, is also an effective teaching and learning tool for quantitative analyses in science courses. Its powerful computational ability and graphical functions make learning statistics much easier than in[...]

Features

This is the first book to show the capabilities of Microsoft Excel to teach physical sciences statistics effectively. It is a step-by-step exercise-driven guide for students and practitioners who need to master Excel to solve practical science problems. If understanding statistics isn't your strongest suit, you are not especially mathematically-inclined, or if you are wary of computers, this is the right [...]

Contents

Sample Size, Mean, Standard Deviation, and Standard Error of the Mean.- Random Number Generator.- Confidence Interval About the Mean Using the TINV Function and Hypothesis Testing.- One-Group t-Test for the Mean.- Two-Group t-Test of the Difference of the Means for Independent Groups.- Correlation and Simple Linear Regression.

Fields of interest

Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences; Statistics (general)

Target groups

Upper undergraduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-3-319-00629-1

Softcover

2013. XVII, 248 p. 159 illus., 158 illus. in color.

\$69.99

ISBN 978-3-319-00629-1

Online orders shipping within 2-3 days.

A. Chaudhuri, Indian Statistical Institute, Kolkata, India; T.C. Christofides, University of Cyprus, Nicosia, Cyprus

Indirect Questioning in Sample Surveys

Indirect questioning is a crucial topic in surveys of human populations. When the issue is about a stigmatizing characteristic (for example about illegal drug use), standard survey methodologies are destined to fail because, as expected, people are not willing to reveal incriminating information or information violating their privacy. Indirect questioning techniques have been devised so that the privacy of participants in a sample survey is protected and at the same time good estimates of certain parameters (e.g. the percentage of people in a certain community who use illegal drugs) can be delivered. The topic is modern and still under development. Indirect Questioning in Sample [...]

Features

Indirect questioning is a crucial topic in surveys of human populations. When the issue is about a stigmatizing characteristic (for example about illegal drug use), standard survey methodologies are destined to fail because, as expected, people are not willing to reveal incriminating information or information violating their privacy. Indirect questioning techniques have been devised so that the privacy of [...]

Contents

Preface.- A Plea for Indirect Questioning: Stigmatizing Issues of Social Relevance.- Specification of Qualitative and Quantitative Parameters Demanding Estimation.- Various Indirect Questioning Techniques.- Randomized Response Techniques to Capture Qualitative Features.- Quantitative Issues Bearing Stigma: Parameter Estimation.- Indirect Techniques as Alternatives to Randomized Response.- Protection of Privacy.- Index.

Fields of interest

Statistics for Social Science, Behavioral Science, Education, Public Policy, and Law; Statistics for Life Sciences, Medicine, Health Sciences; Statistical Theory and Methods; Methodology of the Social Sciences; Mathematics in the Humanities and Social Sciences

Target groups

Professional/practitioner

Type of publication

Monograph

More on www.springer.com/978-3-642-36275-0

Hardcover

2013. XIII, 177 p. 1 illus.

\$109.00

ISBN 978-3-642-36275-0

usually dispatched within 3 to 5 business days

A. Ercan, University of California, Davis, USA; M.L. Kavvas, University of California, Davis, USA; R.K. Abbasov, Khazar University, Baku, Azerbaijan

Long-Range Dependence and Sea Level Forecasting

This study shows that the Caspian Sea level time series possess long range dependence even after removing linear trends, based on analyses of the Hurst statistic, the sample autocorrelation functions, and the periodogram of the series. Forecasting performance of ARMA, ARIMA, ARFIMA and Trend Line-ARFIMA (TL-ARFIMA) combination models are investigated. The forecast confidence bands and the forecast updating methodology, provided for ARIMA models in the literature, are modified for the ARFIMA models. Sample autocorrelation functions are utilized to estimate the differencing lengths of the ARFIMA models. The confidence bands of the forecasts are estimated using the probability densities [...]

Features

This study shows that the Caspian Sea level time series possess long range dependence even after removing linear trends, based on analyses of the Hurst statistic, the sample autocorrelation functions, and the periodogram of the series. Forecasting performance of ARMA, ARIMA, ARFIMA and Trend Line-ARFIMA (TL-ARFIMA) combination models are investigated. The forecast confidence bands and the forecast updating [...]

Contents

1. Introduction.- 2. Long-Range Dependence and ARFIMA Models.- 3. Forecasting, Confidence Band Estimation and Updating.- 4. Case Study I: Caspian Sea Level.- 5. Case Study II: Sea Level Change at Peninsular Malaysia and Sabah-Sarawak.- 6. Summary and Conclusions.- 7. References

Fields of interest

Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences; Statistical Physics, Dynamical Systems and Complexity; Climate Change

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-01504-0

Softcover

2013. V, 51 p. 21 illus., 6 illus. in color. (SpringerBriefs in Statistics)

\$54.99

ISBN 978-3-319-01504-0

usually dispatched within 3 to 5 business days

B.J. Leira, Norwegian University of Science & Trondheim, Norway

Optimal Stochastic Control Schemes within a Structural Reliability Framework

The book addresses the topic of on-line implementation of structural and mechanical design criteria as an explicit part of optimal control schemes. The intention of the present research monograph is to reflect recent developments within this area. Examples of application of relevant control algorithms are included to illustrate their practical implementation. These examples are mainly taken from the area of marine technology with the multi-component external loading being represented as both varying in time and with magnitudes that are represented as statistical quantities. The relevant target group will be mechanical and structural engineers that are concerned with "smart components [...]"

Features

The book addresses the topic of on-line implementation of structural and mechanical design criteria as an explicit part of optimal control schemes. The intention of the present research monograph is to reflect recent developments within this area. Examples of application of relevant control algorithms are included to illustrate their practical implementation. These examples are mainly taken from the area of [...]

Contents

1. Introduction.- 2. Structural Limit States and Reliability Measures.- 3. Dynamic Structural Response Analysis and Probabilistic Representation.- 4. Categories of On-line Control Schemes Based on Structural Reliability Criteria.- 5. Example Applications Related to On-line Control Schemes.- 6. Conclusions.

Fields of interest

Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-3-319-01404-3

Softcover

2013. VI, 98 p. 54 illus., 11 illus. in color. (SpringerBriefs in Statistics)

\$54.99

ISBN 978-3-319-01404-3

usually dispatched within 3 to 5 business days

L. Salmaso, University of Padova,, Padova, Italy; C. Brombin, University of San Raffaele, Milan, Italy

Permutation Tests in Shape Analysis

Statistical shape analysis is a geometrical analysis from a set of shapes in which statistics are measured to describe geometrical properties from similar shapes or different groups, for instance, the difference between male and female Gorilla skull shapes, normal and pathological bone shapes, etc. Some of the important aspects of shape analysis are to obtain a measure of distance between shapes, to estimate average shapes from a (possibly random) sample and to estimate shape variability in a sample[1]. One of the main methods used is principal component analysis. Specific applications of shape analysis may be found in archaeology, architecture, biology, geography, geology, [...]

Features

Statistical shape analysis is a geometrical analysis from a set of shapes in which statistics are measured to describe geometrical properties from similar shapes or different groups, for instance, the difference between male and female Gorilla skull shapes, normal and pathological bone shapes, etc. Some of the important aspects of shape analysis are to obtain a measure of distance between shapes, to estimate [...]

Contents

A brief overview on statistical shape analysis.- Theoretical aspects.- NPC test power behaviour with GPA superimposition and correlation.- Finite-sample consistency of combination-based tests in shape analysis.- Applications to real case studies.- Bibliography.- References.

Fields of interest

Statistics (general); Statistical Theory and Methods; Statistics for Life Sciences, Medicine, Health Sciences

Target groups

Research

Type of publication

Brief

More on www.springer.com/978-1-4614-8162-1

Softcover

2013. X, 95 p. 19 illus., 16 illus. in color. (SpringerBriefs in Statistics, Vol. 15)

\$39.99

ISBN 978-1-4614-8162-1

usually dispatched within 3 to 5 business days

N.U. Nair, Cochin University of Science and Technol, Cochin, India; P.G. Sankaran, Cochin University of Science and Technol, Cochin, India; N. Balakrishnan, Department of Mathematics and Statistics, Hamilton, Canada

Quantile-Based Reliability Analysis

Quantile-Based Reliability Analysis presents a novel approach to reliability theory using quantile functions in contrast to the traditional approach based on distribution functions. Quantile functions and distribution functions are mathematically equivalent ways to define a probability distribution. However, quantile functions have several advantages over distribution functions. First, many data sets with non-elementary distribution functions can be modeled by quantile functions with simple forms. Second, most quantile functions approximate many of the standard models in reliability analysis quite well. Consequently, if physical conditions do not suggest a plausible model, an[...]

Features

Quantile-Based Reliability Analysis presents a novel approach to reliability theory using quantile functions in contrast to the traditional approach based on distribution functions. Quantile functions and distribution functions are mathematically equivalent ways to define a probability distribution. However, quantile functions have several advantages over distribution functions. First, many data sets [...]

Contents

Preface.- Chapter I Quantile Functions.- Chapter II Quantile-Based Reliability Concepts.- Chapter III Quantile Function Models.- Chapter IV Ageing Concepts.- Chapter V Total Time on Test Transforms (TTT).- Chapter VI L-Moments of Residual Life and Partial Moments.- Chapter VII Nonmonotone Hazard Quantile Functions.- Chapter VIII Stochastic Orders in Reliability.- IX Estimation and Modeling.- References.- Index.

Fields of interest

Statistical Theory and Methods; Probability Theory and Stochastic Processes; Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences; Statistics for Business, Economics, Mathematical Finance, Insurance; Statistics for Life Sciences, Medicine, Health Sciences; Mathematical Modeling and Industrial Mathematics

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

More on www.springer.com/978-0-8176-8360-3

Hardcover

2013. XX, 397 p. 20 illus., 3 illus. in color. (Statistics for Industry and Technology)

\$79.95

ISBN 978-0-8176-8360-3

usually dispatched within 3 to 5 business days

Y. Kharin

Robustness in Statistical Forecasting

Traditional procedures in the statistical forecasting of time series, which are proved to be optimal under the hypothetical model, are often not robust under relatively small distortions (misspecification, outliers, missing values, etc.), leading to actual forecast risks (mean square errors of prediction) that are much higher than the theoretical values. This monograph fills a gap in the literature on robustness in statistical forecasting, offering solutions to the following topical problems: - developing mathematical models and descriptions of typical distortions in applied forecasting problems; - evaluating the robustness for traditional forecasting procedures under distortions; [...]

Features

Traditional procedures in the statistical forecasting of time series, which are proved to be optimal under the hypothetical model, are often not robust under relatively small distortions (misspecification, outliers, missing values, etc.), leading to actual forecast risks (mean square errors of prediction) that are much higher than the theoretical values. This monograph fills a gap in the literature on [...]

Contents

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D.J. Bartholomew, London School of Economics, London, United Kingdom

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Features

The classical statistical problem typically involves a probability distribution which depends on a number of unknown parameters. The form of the distribution may be known, partially or completely, and inferences have to be made on the basis of a sample of observations drawn from the distribution; often, but not necessarily, a random sample. This brief deals with problems where some of the sample members are [...]

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